Graham North BSc, BEng

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With over 30 years of IT and engineering experience, I operate as a consultant platform architect/engineer, assisting clients in designing, building, and deploying scalable, secure, and reliable cloud solutions using AWS, GCP, Azure, DevOps, microservices, and AI/ML technologies.

I have a proven track record of delivering high-quality results and consistently exceeding expectations across both public and private sectors.

Passionate about innovation, sustainability, and solving complex problems, I leverage cutting-edge AI/ML solutions to drive transformative outcomes and enhance operational efficiency.

SUMMARY

Results-oriented IT professional with expertise in AI/ML, transformative strategies, and global solutions. Possesses extensive experience in stakeholder management, data modeling, KPI development, and the complete software development life cycle (SDLC). Skilled in methodologies like Domain-Driven Design (DDD), High-Level Design (HLD), Low-Level Design (LLD), Behavior-Driven Development (BDD), and Test-Driven Development (TDD). Adept at Agile and Scrum practices, microservices architecture, API gateways, and implementing continuous integration/continuous deployment (CI/CD) pipelines.

Technologies/Platforms

Experienced in cloud platforms, including Azure, Google Cloud Platform (GCP), and AWS, with a strong foundation in AI/ML services across these environments. Proficient in containerization technologies such as Terraform, Ansible, Kubernetes, Docker, Chroot, and Rancher. Extensive knowledge of AI/ML tools, including TensorFlow, PyTorch, Azure Machine Learning, AWS SageMaker, and GCP's AI Platform. Skilled in financial systems (Forex, Hedge, Fixed), network protocols (TCP, UDP, IP, Multicast), and networking hardware like Cisco and Juniper. Expertise in data architecture technologies, such as Snowflake, Databricks, Apache Hadoop, Apache Spark, and Google BigQuery, with experience in integrating AI/ML pipelines to drive data insights and predictive analytics.

Support and Deployment Experience

Adept at developing and managing complex real-time global systems, including financial trading systems and high-volume websites for clients like BBC, Sony, Ericsson, and Centurylink. With over 15 years in customer-facing support roles, demonstrated exceptional problem-solving skills and expertise in cloud platforms including Azure, GCP, AWS, and ESX. Leveraged AI/ML to enhance DevOps practices, deploying intelligent automation, anomaly detection, and predictive maintenance models, ensuring efficient deployments and system stability. Extensive experience in data architecture, focusing on big data solutions, data lakes, data warehousing, and AI/ML model deployment for advanced analytics.

Operating Systems

Proficient in Unix environments including AIX, Solaris, and HPUX, and various Linux distributions such as RedHat, SuSE, Debian, and Alpine (from Kernel 2.2). Experienced in Windows Server and Desktop environments, iOS, and JUNOS operating systems. Well-versed in modern data and AI operating systems and platforms, including Cloudera, Hortonworks, and Google Dataflow, with expertise in setting up AI/ML processing environments on these platforms.

Software Expertise

Skilled in a wide array of software tools and technologies, including Apache, Tomcat, Jenkins (Java/JVM), and Docker. Proficient in databases such as MySQL, Oracle, MS-SQL, PostgreSQL, and MongoDB, and experienced in AI/ML frameworks like TensorFlow, Keras, and Scikit-Learn for building and deploying models. Familiar with Apache Beam for distributed data processing and data visualization tools like Tableau, Power BI, and integration with AI-driven analytics platforms. Advanced programming capabilities in languages including Python (for AI/ML), Perl, PHP, Ruby, BASH, Java/JavaScript, and NodeJS, with a strong understanding of data interchange formats such as XML and experience in ELK stack technologies including Elasticsearch, Fluentd, Kafka, Zookeeper, and Redis.

COMMERCIAL EXPERIENCE

Embedded Systems Architect - AI & Edge Platforms (Linaro, 02/25 - 06/25)

Platform Vision - Functional Safety-Critical Automotive Systems: Directed the architecture of a next-generation embedded edge compute platform designed for safety-critical automotive use cases, including ADAS and autonomous subsystems. The platform met strict performance, security, and reliability constraints aligned with ISO 26262 ASIL targets.

Performance Optimization - Execute-In-Place (XIP): Engineered MRAM/NOR-based XIP boot and runtime flows to significantly reduce memory footprint and achieve deterministic boot behavior, supporting safety goals such as minimal startup time for powertrain and ADAS ECUs.

Security Architecture - Trusted Boot with Compliance Integration: Developed a secure boot chain using ARM Trust Firmware and trusted execution environments, integrated with cryptographic verification pipelines to meet both cybersecurity (UN R155) and functional safety (ISO 26262 Part 6) requirements.

Embedded AI Enablement - Deterministic Inference Support: Optimized kernel and middleware layers to support real-time AI inference using lightweight frameworks (e.g., TVM, TensorFlow Lite Micro), with guaranteed memory and timing bounds suitable for ASIL-classified environments.

CI/CD Integration - ASPICE-Compliant Build Infrastructure: Designed a modular Yocto and OpenEmbedded-based platform with full CI/CD integration, artifact traceability, and version-controlled configuration management aligned with ASPICE Level 2+ process maturity.

Pre-Silicon Validation - Early Fault Analysis & Traceability: Established a hardware/software co-design model using RTL simulation and static analysis tools to validate system behavior and safety mechanisms before hardware availability, reducing integration risk and supporting traceability.

Edge-to-Cloud Lifecycle - Secure OTA & Auditability: Enabled over-the-air update mechanisms and telemetry pipelines for model versioning, diagnostics, and remote

attestation, supporting cybersecurity monitoring and audit trails in line with ISO 21434 and ASPICE system engineering practices.

Technology Leadership - Regulatory & Roadmap Alignment: Provided executive-level technical strategy aligning platform capabilities with evolving regulatory, functional safety, and AI readiness standards. Guided long-term architectural decisions to support 15+ year product lifecycles in compliance-critical automotive environments.

Cloud Security Architect with AI/ML Expertise (JP Morgan Chase/Photon 7/24 - 02/25)

As a Cloud Security Architect specializing in GCP, I developed, implemented, and maintained Rego policies to enforce robust security controls and compliance standards across GCP infrastructure and applications. I collaborated with development and operations teams to seamlessly integrate security into GCP-focused CI/CD pipelines, automating security checks and scans, and leveraging AI/ML-driven threat detection to enhance security posture.

Rego Policy Implementation: Designed and enforced policy-as-code practices through Rego, tailoring policies to GCP environments and integrating AI-based anomaly detection to proactively identify potential security risks.

AI-Enhanced Threat Modeling & Risk Assessment: Conducted threat modeling and risk assessments for GCP deployments, utilizing AI/ML models to predict potential vulnerabilities and strengthen risk mitigation strategies.

Infrastructure-as-Code (IaC): Architected and implemented secure infrastructure using Terraform to manage GCP resources, ensuring compliance with GCP security best practices while incorporating AI-driven analytics to optimize resource deployment and cost efficiency.

GCP Security Architecture: Utilized extensive GCP expertise to secure containerized applications and microservices, focusing on compliance with GCP security standards. Integrated AI/ML tools to enhance monitoring and anomaly detection within the GCP ecosystem.

Security Assessments & Vulnerability Management: Performed comprehensive security assessments on GCP environments using GCP-specific security tools and AI-driven vulnerability scanners to detect and remediate risks effectively.

Incident Response & Root Cause Analysis: Collaborated with cross-functional teams to swiftly address GCP-specific security incidents, utilizing AI/ML models to facilitate root cause analysis and implement corrective measures.

Knowledge Sharing & Continuous Learning: Stayed abreast of GCP advancements, security trends, and best practices, sharing AI/ML insights with the team to drive a culture of security awareness tailored to GCP environments.

CI/CD Pipeline Automation: Integrated security into CI/CD pipelines using tools like Jenkins and GitLab CI/CD, focusing on GCP-specific configurations and employing AI/ML to optimize pipeline performance and security checks.

SC Cleared Enterprise/Data Architect with AI/ML Expertise (MBDA 12/23 - 6/24)

As the Enterprise Architect and Data Architect at MBDA, I am pivotal in merging cutting-edge technology with the company's strategic goals, particularly in the realms of AI and machine learning. My role encompasses designing a scalable, robust IT infrastructure that seamlessly integrates new cloud technologies, legacy systems, and advanced AI/ML capabilities to meet the demands of defense projects. By balancing innovation with reliability, I support operational excellence and deliver a competitive edge in a highly regulated environment.

Strategic Architectural Vision: Crafted and executed a long-term architectural roadmap for integrating AWS cloud solutions and AI/ML models into the broader IT ecosystem, aligning with business goals and digital transformation initiatives.

AI/ML Integration: Spearheaded initiatives to incorporate AI/ML technologies, enabling data-driven insights and predictive analytics. Integrated ML workflows into the architecture to enhance decision-making capabilities and operational efficiency.

System-Wide Integration: Led the integration of cloud infrastructure, AI/ML tools, and existing on-premise systems to ensure seamless interoperability, data consistency, and optimized workflows across the enterprise.

Data Architecture & Management: Developed and implemented a comprehensive data architecture strategy that supports data governance, quality, lifecycle management, and AI/ML data pipelines. Leveraged cloud and on-premise solutions to ensure robust data integration, storage, and retrieval mechanisms.

AI Governance & Compliance: Established governance frameworks to oversee AI/ML model deployment and usage, ensuring ethical considerations, compliance with industry standards, security protocols, and best practices.

Stakeholder Engagement: Collaborated with C-level executives, IT teams, and business units to translate business requirements into scalable, secure, and efficient technological solutions, with a particular emphasis on AI/ML adoption and innovation.

Innovation & Emerging Technologies: Evaluated and advocated for emerging technologies, such as serverless computing, Infrastructure as Code, and AI/ML, to drive operational efficiency, innovation, and competitive advantage.

Enterprise Security Architecture: Oversaw the development of a comprehensive security architecture within the AWS cloud environment, incorporating advanced security measures and AI-driven anomaly detection to protect critical enterprise assets and data.

Data Governance & Compliance: Implemented data governance policies and procedures to ensure data accuracy, consistency, and security, meeting regulatory requirements and industry standards.

Change Management & Transformation: Guided the organization through significant technological changes, including AI/ML integration, with minimal disruption, maintaining focus on strategic business outcomes through effective change management strategies.

SC Cleared Enterprise/Data Architect(HMRC 2/23 - 8/23)

Dynamic and highly skilled Enterprise Architect with a proven track record in guiding large-scale digital transformation initiatives for government agencies. Recognized for optimizing processes, enhancing security protocols, and ensuring seamless integration of cutting-edge technologies. Experienced in liaising between technical and non-technical stakeholders, ensuring alignment between business goals and IT strategy. Expertise in leading cross-functional teams, implementing robust DevOps practices, and driving innovation in complex, high-stakes environments.

Strategic Leadership: Spearheaded digital transformation initiatives for HMRC, aligning technology solutions with overarching business objectives. Provided strategic guidance to senior leadership, ensuring IT investments translated into tangible business value.

Security and Compliance: Maintained current SC clearance, ensuring adherence to stringent security protocols. Worked closely with regulatory bodies, ensuring compliance with government standards and regulations.

Stakeholder Collaboration: Collaborated seamlessly with diverse stakeholders, translating complex technical concepts into business-friendly language. Facilitated workshops and presentations, ensuring alignment between technical teams and executive leadership.

Cloud Migration and Optimization: Oversaw the migration of HMRC platforms from on-premises infrastructure to cloud environments (AWS and Azure). Implemented cost-effective solutions while optimizing performance and scalability.

Infrastructure Modernization: Led the implementation of Infrastructure as Code (IAC) practices using Terraform, enhancing infrastructure repeatability and consistency. Oversaw the orchestration of containerization and orchestration using Docker and Kubernetes for optimal resource utilization.

DevOps Implementation: Implemented robust DevOps practices, streamlining Continuous Integration/Continuous Deployment (CI/CD) pipelines using Jenkins. Utilized Ansible for configuration management, ensuring seamless and consistent deployments across environments.

Log Management and Analysis: Implemented ELK (Elasticsearch, Logstash, Kibana) stack for real-time log management and issue resolution. Enhanced system monitoring, ensuring prompt detection and resolution of potential issues.

Data Architecture and Management: Designed and implemented data architecture solutions to support HMRC's data strategy. Ensured data integrity, quality, and governance. Worked on data modeling, database design, and optimization for both structured and unstructured data. Integrated big data technologies and data warehousing solutions to enhance data analytics capabilities.

Data Virtualization with Denodo: Implemented Denodo for data virtualization, enabling real-time access to diverse data sources. Streamlined data integration processes, enhancing data accessibility and performance across the organization.

Data Migration Strategy: Developed and executed comprehensive data migration strategies, ensuring smooth transition of data assets during cloud migrations. Employed best practices to minimize downtime and ensure data integrity during the migration process.

Agile Project Management: Collaborated closely with cross-functional teams in an Agile/ Scrum environment. Utilized Jira and Confluence for streamlined project management, enhancing transparency, collaboration, and adaptability in project execution.

Cloud/Data Architect (DWP 06/22 - 2/23)

Highly skilled Cloud Architect with a strong background in AWS, microservices architecture, and cloud deployment technologies. Experienced in designing and implementing secure, scalable, and high-performing cloud environments. Proficient in various programming languages, continuous integration/deployment (CI/CD) pipelines, and Agile methodologies. Adept at translating complex requirements into detailed design documents and leading technical deployments with a focus on customer satisfaction.

Cloud and Data Environment Design: Designed a new AWS environment tailored to the Department of Work and Pensions' requirements, enhancing the existing on-premises setup. Focused on a secure upload service with advanced post-processing capabilities for data. Architected and optimized data pipelines, ensuring efficient data flow and processing across various cloud services.

Requirements Analysis: Conducted comprehensive analysis of client requirements and translated them into detailed High-Level Design (HLD) documents. Clearly outlined system and data architecture, components, and interactions, ensuring alignment with client expectations.

Technical Deployment and Support: Led the technical deployment phase, leveraging strong client relationships established during the design phase. Provided ongoing support, ensuring smooth operations and addressing any technical challenges promptly.

Microservices Architecture: Designed and deployed microservices using AWS EC2, Lambda, EKS, and Fargate. Ensured seamless integration and scalability, optimizing the system's performance and enabling efficient resource utilization. Developed data models and database architecture to support scalable and reliable data storage solutions.

Containerization and Networking: Implemented Kubernetes cloud deployment technology and container networking using Docker. Optimized system performance, ensuring effective management of resources and enhancing overall efficiency.

Data Query and Integration: Developed and implemented data queries using REST API (Get, Post, Put, Delete), handling diverse data structures in JSON, XML, YAML, XPATH, and JSONpath. Integrated Postgres and Oracle databases, ensuring data integrity and seamless transactions. Designed and managed ETL processes to ensure efficient data transformation and loading.

Data Query and Integration: Developed and implemented data queries using REST API (Get, Post, Put, Delete), handling diverse data structures in JSON, XML, YAML, XPATH, and JSONpath. Integrated Postgres and Oracle databases, ensuring data integrity and seamless transactions.

Version Control and Collaboration: Utilized GitLab for version control, promoting collaboration, maintaining code integrity, and enabling comprehensive version tracking.

Documentation and Project Management: Provided customer documentation via Confluence and MS SharePoint, ensuring clarity and accessibility of system and data documentation. Managed the Scrum team, employing Agile development methodologies and utilizing Jira for work breakdown and delivery tracking.

Cloud Architect/Engineer (AccessPay 01/22 - 06/22)

Experienced Cloud Architect/Engineer with a proven track record in designing, implementing, and optimizing cloud solutions for seamless data processing in the financial sector. Proficient in cloud platforms such as GCP, Azure, and Rackspace, along with expertise in infrastructure as code, scripting, and application performance monitoring tools. Skilled in translating complex technical requirements into practical solutions, ensuring alignment with client expectations and business objectives.

Cloud Migration and Optimization: Led the successful migration of AccessPay from physical infrastructure on Rackspace to cloud environments on GCP and Azure. Ensured a seamless transition of data processing for Credit/Debit card transactions, optimizing performance and scalability.

Requirements Analysis and Design: Collaborated closely with clients, understanding business needs and documenting requirements. Developed comprehensive High-Level Design (HLD) and Low-Level Design (LLD) documents, ensuring alignment with client expectations and guiding the implementation process.

Application Performance Monitoring: Implemented Dynatrace, Azure Application Insights, and Log Analytics for robust application performance monitoring. Ensured optimal performance, identified areas for improvement, and proactively resolved potential issues, enhancing overall system efficiency.

Infrastructure and Deployment Management: Developed pipelines for server deployment and backups, optimizing resource utilization and ensuring data security. Implemented task organization and management using Jira and ClickUp, ensuring transparency and collaboration within the team.

Architecture Design and Communication: Created detailed architecture design descriptions, effectively communicating complex technical concepts to the company's board

and stakeholders. Ensured a clear understanding of the implemented solutions, fostering alignment between technical implementations and business goals.

Agile/Scrum Collaboration: Collaborated with cross-functional teams in an Agile/Scrum environment, ensuring seamless alignment between technical implementations and evolving business goals. Utilized Agile methodologies for efficient project management, fostering transparency, collaboration, and adaptability.

Continuous Integration/Deployment (CI/CD): Utilized AzureDevOps for code management and deployment, implementing Continuous Integration/Deployment (CI/CD) processes. Ensured efficient and automated workflows, enabling rapid development, testing, and deployment cycles.

Cloud/SRE Architect/Engineer (Bought by many 09/21 - 01/22)

Results-oriented Cloud/SRE Architect/Engineer with a focus on automation and enhancing system efficiency. Skilled in AWS services and a variety of programming languages. Experienced in collaborative analysis, design documentation, and providing valuable support and advice to cross-functional teams. Proficient in Continuous Integration/ Deployment (CI/CD) pipelines, microservices architecture, and infrastructure as code practices. Adept at Agile methodologies and utilizing various tools to streamline project management.

Automation and System Enhancement: Adapted inherited systems by introducing automation, enhancing overall system efficiency and reliability. Played a key role in supporting other teams by addressing issues and providing valuable advice, ensuring seamless operations across the organization.

Collaborative Analysis and Design: Participated in collaborative analysis sessions with architects and engineers, contributing to the creation and refinement of comprehensive High-Level Design (HLD), Low-Level Design (LLD), and Requirements documents. Ensured alignment with project goals and client expectations.

Continuous Integration/Deployment (CI/CD): Worked extensively on CI/CD deployments utilizing CodeBuild, CodeDeploy, and CodePipeline. Implemented Lambdas and CloudFormation for efficient and automated workflows, streamlining development, testing, and deployment processes.

Programming Languages: Proficient in NodeJS, JavaScript, TypeScript, Python, Bash, and C++. Leveraged a diverse skill set to address various development and automation challenges.

Cloud and Tools: Utilized AWS services, including Lambda, for building scalable and reliable applications. Familiarity with Netlify, Halo, Heroku, and AWS CDK, ensuring optimal utilization of cloud resources and efficient application deployment.

Version Control and Issue Tracking: Managed source code repositories in GitHub, ensuring version control and collaboration among team members. Utilized Halo as the issue tracker, maintaining a clear record of reported and resolved issues.

Project Management and Documentation: Provided customer documentation via ClickUp, ensuring clarity and accessibility of project-related information. Managed the Scrum team using ClickUp, employing Agile methodologies for efficient work breakdown and tracking of project deliverables.

Cloud Architect/Engineer (PredictX 06/21 - 09/21)

Dynamic and solutions-focused Cloud Architect/Engineer with expertise in Google Cloud Platform (GCP) and a proven track record in designing and implementing cloud environments for optimizing large organizations' expenses through big data solutions. Adept at collaborative analysis, design documentation, and providing ongoing technical

guidance. Skilled in Continuous Integration/Deployment (CI/CD) pipelines, microservices, and Infrastructure as Code (IAC) practices. Experienced in business analysis and Agile methodologies, ensuring seamless project execution and client satisfaction.

GCP Environment Design: Designed a robust GCP environment for PredictX, leveraging big data solutions to assist large organizations in reducing expenses. Engineered scalable and cost-effective solutions aligned with client requirements and business goals.

Requirements Analysis and Design Collaboration: Actively participated in analyzing client requirements, collaborating closely with architects and engineers to adapt High-Level Design (HLD), Low-Level Design (LLD), and Requirements documents. Ensured clarity and alignment with project objectives.

Technical Guidance and Collaboration: Provided ongoing technical guidance, emphasizing teamwork and communication among architects and engineers. Facilitated collaboration and knowledge sharing, ensuring a cohesive and efficient project execution process.

Deployment and IAC Solutions: Engineered deployment pipelines and Infrastructure as Code (IAC) solutions for CI/CD deployments, streamlining development, testing, and deployment processes. Implemented efficient automation for seamless and consistent deployments.

Cloud Education and Business Analysis: Educated the team on cloud services and GCP usage, ensuring optimal utilization of cloud resources. Also functioned as a business analyst, understanding and translating business needs into technical requirements, fostering effective communication between stakeholders and the technical team.

Scrum Master Role: Served as a Scrum Master for the team when required, ensuring Agile best practices, efficient sprint planning, and smooth execution. Managed the Scrum team using Jira, fostering transparency and collaboration within the team.

Version Control and Documentation: Managed source code repositories in BitBucket, GitWeb, and GCP Source, ensuring version control and collaboration. Provided customer documentation via Confluence and Google Docs, ensuring clarity and accessibility of project-related information.

SC Cleared Cloud Architect/Engineer(HMRC 09/20 - 05/21)

Certified and highly skilled Cloud Architect/Engineer with a focus on automating deployment processes for critical systems. Experienced in global transformation initiatives, stakeholder management, and implementing agile methodologies. Proficient in various technologies and tools, with a strong background in continuous integration/deployment (CI/CD), microservices, and infrastructure as code practices. Adept at collaborating with cross-functional teams, managing cloud platforms, and ensuring seamless project execution.

Deployment Automation: Collaborated with HMRC to automate deployment processes for customs VAT systems. Designed and delivered robust CI/CD pipelines in Jenkins and GitLab CI, ensuring efficient and automated workflows.

Stakeholder Collaboration: Worked closely with HMRC stakeholders and architects to understand and implement requirements aligned with design documents. Updated High-Level Design (HLD) and Low-Level Design (LLD) as necessary, ensuring seamless alignment with project goals.

Collaborative Coding Workshops: Organized and managed collaborative coding workshops, fostering teamwork and innovation. Worked alongside engineers to code solutions, ensuring the implementation of best practices and optimal solutions.

Cloud Platform Management: Managed cloud resources on Amazon Web Services (AWS), including VPC, EC2, and RDS. Ensured optimal utilization of cloud services, enhancing system performance and scalability.

Version Control and Documentation: Retained source code in GitLab and BitBucket, ensuring version control and collaboration among team members. Provided comprehensive customer documentation via Confluence, fostering clarity and accessibility of project-related information.

Agile Project Management: Managed the Scrum team using Jira and Trello, implementing Agile methodologies for efficient work breakdown, task management, and tracking of project deliverables. Ensured transparency, collaboration, and adaptability within the team.

Cloud Architect and Engineering Manager (Nord Anglia Education 02/20 - 08/20)

Results-driven Cloud Architect and Engineering Manager with a proven track record in global transformation projects. Proficient in stakeholder management, design documentation, and technical guidance. Skilled in Azure cloud services, continuous integration/deployment (CI/CD) pipelines, and fostering a collaborative team culture. Experienced in managing international teams, ensuring cross-platform compatibility, and promoting innovation.

Global Transformation Project: Led a consultancy team in a global transformation project for Nord Anglia Education. Managed delivery automation and coordinated remote teams to ensure successful product deployment.

Requirements Analysis and Design Documentation: Conducted in-depth analysis of client requirements. Created and updated comprehensive High-Level Design (HLD), Low-Level Design (LLD), and Requirements documents. Ensured clarity and alignment with client expectations, guiding the implementation process.

Technical Guidance and Team Mentoring: Provided technical guidance throughout the project lifecycle, ensuring that implemented solutions adhered to documented designs and requirements. Mentored and guided development teams, fostering a culture of collaboration, continuous learning, and innovation.

Deployment Pipeline Design: Designed and delivered a deployment Proof of Concept (POC) pipeline on Azure using GitHub, Azure DevOps, Terraform, and Docker. Ensured the pipeline's portability and cross-platform compatibility, meeting customer requirements and enhancing project flexibility.

International Team Management: Managed an international team of around 20 engineers located in Brazil, UK, and China. Oversaw the coding and testing of the product, ensuring efficient collaboration, adherence to timelines, and high-quality deliverables.

Cross-Platform Design: Designed the solution to be portable and cross-platform, accommodating the customer's requirement. Ensured compatibility across various platforms, enhancing the product's accessibility and usability.

Version Control and Documentation: Managed source code repositories in GitHub, ensuring version control and collaboration among team members. Provided comprehensive customer documentation via Confluence, ensuring clarity and accessibility of project-related information.

Agile Project Management: Managed the Scrum team using Azure Boards, implementing Agile methodologies for efficient work breakdown, task management, and tracking of project deliverables. Ensured transparency, collaboration, and adaptability within the team.

Cloud Technologies Coach/Mentor (NetLinux 10/19 - 02/20)

Experienced Cloud Technologies Coach/Mentor with a passion for guiding and inspiring young talent in the realm of cloud technologies. Proficient in mentoring, coaching, and providing ongoing technical guidance to junior architects and development teams. Skilled in Agile methodologies, continuous integration/deployment (CI/CD) pipelines, and fostering collaboration and knowledge sharing among aspiring cloud technology professionals.

Mentorship and Technical Guidance: Provided ongoing technical guidance to young individuals learning cloud technologies, emphasizing teamwork, communication, and collaboration among architects and engineers. Mentored junior architects and development teams, encouraging knowledge sharing and fostering a culture of collaboration.

Training Program Creation: Developed a comprehensive training program focused on cloud technologies. Designed the program to empower individuals to create a web service on Google Cloud Platform (GCP). Ensured the training curriculum aligned with industry best practices and emerging cloud technology trends.

Remote Training Delivery: Conducted entirely remote training sessions using Slack, leveraging digital communication tools to facilitate interactive and engaging learning experiences. Utilized remote collaboration platforms to foster a virtual learning environment conducive to skill development.

Cloud Platform Utilization: Instructed individuals on the effective use of Google Cloud Platform (GCP), covering various services and tools within the platform. Guided participants in hands-on exercises, enabling them to gain practical experience in building and deploying cloud-based solutions.

Version Control and Team Management: Managed source code repositories in GitHub, ensuring version control and collaboration among participants. Utilized Jira for team management, facilitating task organization, work breakdown, and tracking of project-related activities.

Cloud Architect and SecOps (Vodafone 07/19 - 10/19)

Strategic and detail-oriented Cloud Architect and SecOps professional with a wealth of experience in designing and implementing secure, scalable, and compliant cloud solutions. Skilled in stakeholder management, SDLC, and ensuring adherence to security protocols while facilitating seamless onboarding processes for new customers. Proficient in a wide range of cloud technologies, continuous integration/deployment (CI/CD) pipelines, and scripting languages. Adept at fostering collaboration among cross-functional teams and providing technical leadership.

Demographic Information Platform: Led the deployment and management of Vodafone's Big Data cloud offering, a demographic information platform, ensuring compliance with GDPR and data protection regulations.

Onboarding and Security: Implemented well-defined processes to onboard new customers into the system while maintaining the security and protection of the service. Added customers to Google Cloud Platform (GCP) IAM and integrated customer environments within the security perimeter (VPCSC) using GoCD pipelines primarily written in Terraform and Python.

Security Perimeter Establishment: Established robust security perimeters by collaborating with leadership and architects. Ensured full accountability for auditing by creating stringent business processes. Implemented security measures and protocols to protect customer data within the cloud environment.

Application Suite Design: Designed a suite of applications for customer platform management, utilizing Ruby for middleware and JavaScript for frontend development. Integrated applications using GitHub API and GCP API. Implemented Blue/Green

deployment strategies using GoCD onto GCP, ensuring seamless updates and minimal downtime.

Team Leadership and Collaboration: Organized and led the team as a Scrum Master, coordinating efforts for application stack design and deployment pipelines. Supported the customer in the use of products, fostering effective collaboration and ensuring customer satisfaction.

Technology Stack: Deployed on GCP using Jenkins (Java/JVM) and GoCD. Utilized Git (GitHub Enterprise) for version control, managed tasks and projects using Jira (Kanban and Scrum), and documented processes in Confluence.

Principle DevOps Engineer/Cloud Architect (Lloyds Banking Group 11/18-07/19)

Strategic and results-oriented Principal DevOps Engineer and Cloud Architect with extensive experience in global transformation projects, Open Banking platforms, and cloud strategies. Proficient in stakeholder management, data modeling, SDLC, and designing complex cloud architectures for public consumption. Skilled in a wide array of technologies and tools, including Kubernetes, CI/CD pipelines, Terraform, Ansible, scripting languages, and version control systems. Adept at managing diverse teams, fostering collaboration, and delivering high-impact solutions for complex financial ecosystems.

Open Banking Platform Deployment: Supported developers in deploying Lloyds Banking Group's Open Banking platform for public consumption. Collaborated with stakeholders and developers to ensure seamless deployment of the new banking strategy.

Cloud Architecture Design: Led the cloud architecture design for Lloyds Banking Group's new cloud strategy on Microsoft Azure and Google Cloud Platform (GCP). Created detailed High-Level Design (HLD) and Low-Level Design (LLD) documents, outlining system components and technical specifications.

Requirements Analysis and Iterative Design: Conducted requirements analysis sessions, capturing client needs and updating design documents iteratively to accommodate changing project scopes and objectives. Ensured alignment between evolving requirements and the designed cloud architecture.

Kubernetes Cluster Deployment: Designed and deployed Kubernetes clusters in Azure Kubernetes Service (AKS) and Google Kubernetes Engine (GKE). Utilized Azure DevOps and Google APIs to orchestrate various services associated with building, scanning, verifying, and deploying development output.

Tools and Technologies: Implemented CI/CD pipelines using GitLab CI, Jenkins (Java/JVM), Sonar, Selenium, Nexus, (Go)Harbor, Urban Code Deploy, and Veracode. Managed deployments on IBM Bluemix (SoftLayer) and utilized Cloud Foundry Platform as a Service (PaaS). Employed Gerrit, GitHub Enterprise, and GitLab for source control and Jira for team management. Documented processes and designs in Confluence.

Stakeholder Management and Collaboration: Effectively managed stakeholder relationships, ensuring transparent communication and alignment of project goals. Collaborated closely with cross-functional teams, fostering a culture of innovation, collaboration, and continuous improvement.

DevOps Engineer/Architect (Campus Society / Connectt 07/18-10/18)

Results-oriented and innovative DevOps Engineer/Architect with a proven track record of transforming social media platforms into high-volume, world-class business solutions. Proficient in stakeholder management, SDLC, and microservices architecture. Expertise in continuous integration/deployment (CI/CD) pipelines, infrastructure as code (IAC), and containerization technologies. Skilled in a wide array of programming languages and tools,

enabling the creation of seamless, high-performance systems. Adept at driving global transformation, fostering collaboration, and ensuring reliable, high-traffic platforms for businesses.

Platform Evolution: Led the evolution of Campus Society's social media platform into a high-volume, business-focused solution. Developed detailed High-Level Design (HLD) documents, outlining the expansion strategy and architectural changes.

Microservices Architecture: Transitioned the monolithic architecture to an infrastructure as code (IAC) microservices-based cloud architecture. Utilized Terraform and BASH for GitLab CI to implement continuous blue/green deployments, eliminating downtime and enabling live deployments.

Deployment Automation: Implemented continuous integration/deployment (CI/CD) pipelines using GitLab CI, ensuring rapid, automated, and error-free deployments. Developed a new build system to accelerate product development on Digital Ocean and AWS.

Logging and Performance Optimization: Implemented IAC logging aggregation using ELK (Elasticsearch, Kibana, Filebeat, Metricbeat) on Digital Ocean and AWS. Conducted performance tuning using Selenium, Celery, Python, and BASH on AWS, enhancing the platform's capabilities from 100 hits/sec to over 1,000 hits/sec with potential for further scaling.

Stakeholder Management and Support: Managed stakeholder relationships and provided support to community teams, partners, and the public for live issues. Ensured minimal downtime during major site upgrades, enhancing user experience and platform reliability.

Technologies Used: AngularJS, Django, MongoDB, Postgres (RDS), Elasticsearch, Kibana, Filebeat, Metricbeat, Docker, GitLab CI, Terraform, BASH, AWS, Digital Ocean.

Version Control and Project Management: Utilized Git with GitLab, managed projects using Jira Scrum and Kanban boards. Documented processes and designs in Confluence.

DevOps Engineer/Architect (QuintilesIMS 05/17-03/18)

Dynamic and results-driven DevOps Engineer/Architect with a solid background in global transformation, stakeholder management, and SDLC. Expertise in microservices, continuous integration/deployment (CI/CD), and infrastructure as code (IAC). Adept at creating high-level design documents, conducting requirements analysis, and engineering cloud migration strategies. Proficient in various technologies and tools, enabling the establishment of efficient and stable deployment pipelines. Proven ability to enhance productivity and support teams in complex, high-stakes environments.

Continuous Deployment Pipeline: Joined the existing DevOps team to create a comprehensive continuous deployment pipeline for applications designed to collect, process, and report medical data for QuintilesIMS clients. Upgraded an end-of-life product, stabilizing and enhancing the middleware infrastructure.

Cloud Migration Strategy: Engineered the cloud migration strategy, developing detailed High-Level Design (HLD) documents that outlined the architecture. Conducted in-depth requirements analysis sessions, translating client needs into technical requirements, and iteratively updated design documents to adapt to changing project dynamics.

Infrastructure Automation: Addressed existing infrastructure challenges by implementing Docker Swarm deployments using Jenkins Pipelines (Java/JVM) on VMWare ESXi. Developed infrastructure as code (IAC) deployments for critical components such as Kafka, Zookeeper, Elastic search, Logstash, and Kibana (ELK stack) using BASH and Ansible, ensuring consistency and predictability.

Continuous Deployment Enhancement: Adapted legacy Jenkins (Java/JVM) builds to Jenkins IAC continuous deployment Pipelines builds, establishing a stable and predictable

IAC continuous deployment pipeline. Enabled developers to focus on application development, significantly increasing productivity.

Client Solutions and Support: Provided technical support to developers, management, architects, and clients. Resolved bugs, devised customer-specific solutions, and created a Dockerized deployment of Jira Service Desk using IAC continuous deployment with Jenkins Pipelines (Java/JVM) on VMWare ESXi. Presented the project, including cost estimation, to senior management.

POC and Future Planning: Contributed to proof of concept (POC) and analysis for the company's future Mesos platform, staying ahead of emerging technologies and trends.

Tools and Technologies: Ansible, Puppet, GitLab, Jenkins Pipelines (Java/JVM), Jira, Confluence, Docker, ELK Stack, Kafka, Zookeeper, Mesos, DC/OS, VMWare ESXi.

Team Management: Managed teams using Kanban workflow in Jira for workflow management and Confluence for documentation. Supported development teams utilizing Scrum methodology.

Global Collaboration: Traveled to Warsaw and Paris to support international teams, ensuring consistency in deployment processes and providing real-time technical assistance.

DevOps Technical Engineer/Architect (Secret Escapes 02/17-04/17)

Strategic and results-oriented DevOps Technical Engineer/Architect with extensive experience in stakeholder management, HLD/LLD, continuous integration/deployment (CI/CD), and automation. Proven ability to design and implement efficient CI pipelines, collaborate closely with cross-functional teams, and address critical issues in build and test processes. Proficient in technologies such as Jenkins Pipelines, Ansible, AWS, MongoDB, and ELK stack. Adept at translating business needs into actionable design specifications, enhancing the overall product quality and performance.

DevOps Engineer/Architect (Home Office 05/16-11/16)

Skills: Global Transformation, Stakeholder Management, KPI, Data Modelling, SDLC, Roadmaps, HLD, LLD, BDD, TDD, Agile, Microservices, CI/CD, POC, ITIL, RDBMS, IAC, PAC, COTS, SOAP, REST, SLA, Docker, Kubernetes, ELK, Rancher, Alpine, CoreOS, Postgres, Hadoop, Apache, Tomcat, Java, Continuous Integration/Deployment, Puppet, Heira, R10K, Ansible, Jenkins (Java/JVM), CloudFormation, Terraform, AWS (VPC/EC2/RDS), Git, Jira, Stash/BitBucket, Confluence, NodeJS, Scrum/SAFe

Mastek worked with the Home Office onsite in Fleet Street to provide solutions in their Immigration Platform Technologies.
This was a £13.8 billion project which was delivered early and inside the budget.
Their main issue was the layers of legacy hacked deployment strategies which were now impossible to maintain.
I was asked to provide a solution encompassing their existing Puppet/RPM solution into a new Kubernetes/Docker/AWS continuous deployment environment.
This involved assessing their existing Puppet/Jenkins (Java/JVM)(JJB)/RPM/Nexus development toolset and porting it to Terraform/AWS/Jenkins (Java/JVM)/Docker/Nexus.
Conducted requirements analysis sessions, translating business needs into technical specifications and updating the HLD and Low-Level Design (LLD) documents iteratively to ensure alignment with project objectives.
Modules which were written in Java for Apache Tomcat were wrapped into Docker containers and regression tested on the new AWS platform with Jenkins Pipeline (Java/JVM) scripts.
Postgres Database scripts which were written in Liquibase were ported to AWS RDS service which was also regression tested by Jenkins Pipeline scripts (Java/JVM).
Also the Hadoop cluster was moved to the AWS EMR service which was also regression tested.

I was involved in the coding of the scripts to port to the new infrastructure
Working as part of a team I managed to port most of the infrastructure to the new model
which mean the developers could focus on improving the product with shorter deployment
cycles.
Also working with another consultant we coded up a logging aggregation solution as IAC in
Jenkins (Java/JVM) for ELK: ElasticSearch, Logstash and Kibana.
The AWS estate was coded and deployed using Terraform and CloudFormation.
Servers deployed as IAC with Ansible and maintained with Puppet Heira.
All code was controlled in GIT/BitBucket(Stash).
The teams were managed as Scrum/SAFe using Jira for all workflow and Confluence for
documentation.

Lead Real-Time DevOps Technical Engineer/Architect (CenturyLink 02/13-01/16)

Skills: Stakeholder Management, KPI, Roadmaps, HLD, LLD, POC, ITIL, ETL, RDBMS, SDN, , COTS, SOAP, REST, MFA, SSO, SLA, Financial (Nasdaq, NYSE, LSE, BME, TSE, +others, Equities, Derivatives, Forex), MetaTrader 4+, ITCH/MITCH, FIX, MoldUDP/MoldUDP64, ATM, RIP, OSPF, IS-IS, STP, BGP, MPLS, Ethernet, Cisco, Juniper, Windows, Linux, Puppet, Chef, VMWare (ESX/vSphere), HyperV, AWS (VPC/EC2/S3/IAM).
Reason for Leaving: Business shrunk causing reversal of granted career move.

CenturyLink (formerly Savvis) provide global hosting and network services to financial and
other clients.
Hired to provide expert-level technical support for their main financial customer Thomson-
Reuters and their customers.
Retained business worth £109 million with Thomson-Reuters for CenturyLink.
Thomson-Reuters customers include RBS, HSBC, Barclays, Lloyds, Meryll Lynch, Ava
Kapital, plus many other banks and financial organisations.
Develop and provide fixes for network and hosting problems.
Work with Thomson-Reuters engineers and management to maintain their customer trading
platforms.
Their main problem was loss of data and traffic on international under sea connections.
Required to understand financial applications at kernel/device level to work with customer
developers in C++/Java on Linux and Windows.
Also required to understand IP, ATM and MPLS networks at CCIE level to work with
suppliers on static and dynamics routing global networks.
Administered cloud systems on ESX (LabView/vSphere), HyperV and some on AWS (VPC/
EC2/S3/IAM) for customers.
Applications were deployed as Docker containers and chroot jails onto ESX and AWS.
As lead worked architects to refine new solutions and senior leadership to SVP level to
manage the customers needs.
Using specialised equipment of my own design, I managed to provide insight into the details
of the network issues, which meant solutions were then forthcoming in a predictable and
manageable way.
This retained a lucrative delicate customer contract with Thomson Reuters and other
financial businesses, including banks, which were in trouble since I joined.
Provided consultancy services for Thomson Reuters developers to help them adopt DevOps
culture.
Required to use Remedy BMS software for incidents/requests also Puppet Enterprise and
Chef for deployment/administration.

Direct reports:2 Reporting to: Global Senior Manager
Indirectly managing approx 50 Engineers workload when required.
Cooperatively managing a budget of £110million.

LTE Platform DevOps Engineer (Alcatel-Lucent 11/12-01/13)

Skills: Linux, SMB/CIFS, NFS, DHCP/DNS, Apache, Python, packages, Bash/Awk/Sed, Jenkins (Java/JVM)/Hudson, Docker, chroot, VMWare (ESX/vSphere).

Alcatel-Lucent provide telecoms and mobile networks world wide.
Hired to work on the continuous integration testing systems which are on Jenkins (Java/JVM)/Hudson.
Developed python/bash test scripts for LTE platform builds to test on virtual machines on ESX.
Worked on existing deployment and testing system to improve coverage with Jenkins (Java/JVM), Puppet, and both chroot and Docker on ESX.
Also worked on fixing bugs in the build to pass tests.
System involved fixing package builds (debian and tar).
Worked on a Scrum (agile) managed environment.
Worked on files in clearcase version control.

System DevOps Engineer (Qualcomm 02/12-09/12)

Skills: Debian Linux, Windows, SMB/CIFS, Apache, Perl, PHP, Javascript, DEB packages, Bash/Awk/Sed, Virtualisation (HyperV), Puppet, Docker, chroot.

Qualcomm are silicon producers for the mobile phone industry.
They needed server provision for a development project.
Their main issue was a temperamental product which had technical instability which blocked the progress.
I created and deployed the virtual machine hosting environment and client machines as per company requirements.
I solely administered: git source control, bugzilla, apache, documentation (service) and automated testing service.
All the facilities are company wide services.
I also created and ran automated tests on the developed software using Puppet and chroot/Docker for HyperV.
Working with a hardware engineer, I managed to debug technical issues and stabilise the product so they could move the project to completion.
The client machines were a combination of Windows XP, Windows 7 and Debian Linux.
As part of the testing, jobs were run from the Linux machine to run Windows applications using bash/DOS batch and remote desktop.
I also set up the debian server to shared company and local filesystems using SMB/CIFS via it's apache webserver.
Company filesystems were held on a NetApp filer and used Active Directory (LDAP/Kerberos) for security.

Direct reports:1 Reporting to: Program Manager

Embedded System DevOps Engineer (AceAxis Ltd 07/11-09/11)

Skills: RedHat Linux, XEN, Puppet, Docker, chroot, PXE, Perl, RPM, Bash/Awk/Sed.

AceAxis produce radio masthead LTE systems for the mobile device industry
Worked on Linux platform to debug issues with their systems.
Deployed test infrastructure on LAMP and XEN virtualisation using Puppet.
Continuous integration and deployment using Hudson, Puppet and chroot on Xen.

Test System Developer/Administrator/Architect (ST 11/10-06/11)

Skills: RedHat Linux, Puppet, WordPress, Drupal, PXE, Perl, RPM, Bash/Awk/Sed.

ST are a global embedded silicon manufacturer.
Test system design, deployment and management.
Asked to deploy and support Wordpress and Drupal environments.
Deployed a continuous integration on VMWare using Puppet and Hudson/Jenkins (Java/JVM).

Required to manage 2 teams of developers

Media System Developer/Administrator/Architect (BBC 07/10-08/10)

Skills: SuSE Linux, PXE, Yast, Perl, RPM, Puppet, Bash/Awk/Sed, ESX.

Here the project was to deploy/administer Ingex as a commercial product in a similar way to the Sony product on which I was working 2005-6
This contract was cut short (6 moths to 5 weeks) due to a change in the business requirement.
I was tasked to create/administer an repeated deployment/release and test system using Puppet on ESX.
During the short time I was on the project I created a fully automated nightly remastered DVD deployment from scratch.
I also created a full matrix automatic test system for all the current and future video+audio formats Ingex supports.
I worked with the R&D team to create the automated test plan and worked with their CVS, SVN and GIT repositories.
I also was required to deploy/administer a separate GIT repository for the release code.

Direct reports:1 Reporting to: Project Manager

Cluster Administrator (Schlumberger 12/08-01/10)

Skills: Puppet, Apache, Tomcat, Jira, RHEL 4/5/6, Kickstart, RPM, Server Administration, Virtualisation (ESX/vSphere/Oracle), Active Directory, Clusters, NAS, Perforce, PVCS, Scripting automation, Cisco Networking, Nagios, SNMP.

Schlumberger are the leaders in providing and support high performance simulation software to the oil industry in which I was:
Responsible for 32Tb NetApp Filer.
Responsible for user disc allocation across the whole company.
Worked closely with High Performance Computing (HPC) department.
Responsible for administration of several Linux High Performance Computing clusters (64 node, multicore).
Deployed and administered company wide build servers using Puppet.
Wrote many management and maintainence web interfaces in Perl with AJAX.
Wrote many automation systems in Bash/sed/awk.
Required to research and deploy virtualisation solution for testing team, including leaseing with testing team project managers.
Responsible for deployment and administration of virtualisation solution for testing team.
Provided advice to senior management regarding virtualisation (ESX/Oracle) strategies.
Responsible for maintainence of Apache/Tomcat servers.
Responsible for Cisco switch maintainence.
Deployed and maintained Nagios monitoring across most servers and clusters using SMNP and wrote plugins.
Worked closely with PC support team to provide integrated Linux/Windows deployment and

support strategies.
Worked closely with Windows server and corporate network support teams.
Working with Perforce, deployed Linux Perforce/PVCS server and integrated it to the existing Windows Perforce source control strategy.
Deployed and maintained Linux servers as needed.

Direct reports:1 Reporting to: IT Manager

Network Architect/Software Engineer (Frazer-Nash 02/08-10/08)

Skills: Web Design, Perl/CGI/PHP, Java/Javascript/AJAX, XML, Apache, Server Administration, Virtualisation (EC2), Windows Development/Administration, Active Directory, Embedded, CANBUS, PIC.
Reason Leaving: Agreed salary increments not honoured, plus no pension or heath benefits.

Installed and maintained RedHat virtualisation.
Installed and maintained RedHat web server for internal hosting testing (EC2).
Installed and maintained Windows terminal server (virtual server) and added to Active Directory controller.
Installed and maintained web facing RedHat project collaboration server.
Created browser based interface and support tools in Perl/JavaScript and C/C++.
Worked with the network management and intranet team to provide additional support for Linux-based tools.
Provided advice, support and training.
Key software engineer on a Windows development project including QT4 development.
Developed Advanced GUI which is used an in-car display, using multithreading and OpenGL.
Worked on high power brushless DC motor control, modified embedded Space Vector Modulation control software to improve BLDC performance.
Modified CANBUS interface code to improve debugging of embedded 16-bit BLDC controller.
Interfaced advanced display to hardware via PIC.

Direct reports:3 Reporting to: Director Software Engineering

LINUX/UNIX Technical Support Specialist on BBC.CO.UK (Siemens 07/07-12/07)

Skills:RedHat/Solaris Server Administration, Web Design, Perl/CGI/PHP, Java/Javascript/ AJAX, XML, Apache, mod_write, mod_proxy, Real/Windows Streaming Audio/Video Administration, NAS/SAN, Load Balancing/Clustering, DNS, DHCP, SCSI, RAID, Customer Facing, Remedy, Scripting automation.
Reason Left: Probation period, unsuitable role (training not provided as arranged)

Siemens manage the web sites for a number of customers including BBC and ONS
Largest was BBC website farm of approx 500 servers which are balanced in groups
The role involved working on Remedy tickets raised by the customers and problems raised by system monitoring.
Most of the work involved resolving machine outages, hardware, DNS and streaming issues, and web application problems
Configured caching farms and load balancing web/application servers using DNS.
Used virtualisation tools (vmware) and built and maintained large scale application stacks.
An element of the role required me to be 24 hour on-call for one week periods.
Solaris training not provided as agreed in interview which held back my progress in the role.

Direct reports:5 Reporting to: Team Manager

Linux Development Contract (Datapulse 02/07-06/07)

Skills: Web Design, Perl/CGI/PHP, Java/Javascript/AJAX, XML, Apache, Embedded (Debian/ Ubuntu) Linux, kernel, 16-bit (Philips XA), H323, Bash/Awk/Sed, VC6, ActiveX, DLL

Applied a firmware modification to Philips XA processor based Nortel PABX client in Embedded C/Assembler.
Revised a modified Debian distribution for USB embedded EPIA10000.
Applied software fixes to Linux services in GNU C++/Perl/Bash.
Successfully undertook major refactoring of Windows client side code in Visual C++ 6 ActiveX and DLL.
Fixed long outstanding bugs (2+ years).
Provide Linux Mentoring.
Set up documentation server on LAMP stack (RedHat Linux/Apache/MySQL/PHP) using MediaWiki/Doxygen/HTdig.
Used the companys Visual SourceSafe source control system and PRF (in house) bug tracking system.

Direct reports:3 Reporting to: Project Leader

Linux Development, Administration and Support Contract (Sony 06/05-12/06)

Skills: Web Design , Perl/CGI/PHP, Java/Javascript/AJAX, XML, Apache, Linux kernel, clusters, MySQL, Apache, MIPS, RedHat ES 3/4, Kickstart, RPM, RedHat Network, Windows Active Directory, DVB, HD, MPEG, Bash/Awk/Sed, RAID management, disaster recovery solutions.

Debugged and documented MIPS DVB target embedded Linux platform using GNU tools.
Provided mentoring services for colleagues (as part of contract requirement).
Wrote Installation software for RHEL3 Linux target in TCL/TK and Bash/Awk/Sed.
Adapted a Linux cluster management system using Condor/Bash/Awk/Sed.
Administered RedHat media server to work with Window XP and Mac clients via Samba/ CIFS and NFS in BASH/Perl.
Package management via the RedHat Network.
Repackaged RPM builds for deployment.
Adapted web based account administration tool in Perl/CGI/XML/Awk/Sed/Bash.
Refactored Web tool to PHP/JavaScript/XML from Perl.
Created RAID system and web-based RAID management system in Linux using Linux RAID and PHP/BASH.
Debugged and redesign system to add co-operation between Windows 2K/2K3 Domain Controller, RedHat ES Server, Windows XP and Mac clients using Samba/CIFS, Active Directory and NFS in Bash/Perl/Awk/Sed.
Adapted RedHat install CD/DVD to install Sony media system as well as RedHat OS as an media server build system using CD remastering tools and Python.
Involved(paired) in writing/adapting/debugging of DV/HDV MPEG format converters (ffmpeg/avilib/quicktime) in C/C++/Java.
Involved in project level implementation details of Java video codecs (Quicktime).
Included security key system to CD/DVD installer to lock installs to hardware using Linux network drivers and MD5 checksumming in Bash/C.
Adapted CD Linux distribution to create a server disaster recovery solution using Knoppix/ Gentoo, KDevelop/QT and CD remastering tools.
Collaborated development with Sony's Californian team using Skype/email/CVS/TestTrack.
Used company's CVS, Clearcase, etc source control systems, project management/bug tracking software (Bugzilla/TestTrack).
Provided general Linux site support and mentoring.

Direct reports:1 Reporting to: Project Manager

Embedded DAB Contract (Frontier Silicon Ltd 03/05-06/05)

Skills: Embedded C, GNU toolset, Bash, Awk, Sed, Device Drivers, DAB, JTAG, VHDL, Logic/ Scope Analysis

Wrote flash drivers using GNU tools and Lauterbach JTAG on embedded hardware target.
Wrote PC based emulation of hardware with GNU Tools in Bash/Awk/Sed/C/C++.
Worked with Hardware Engineers to diagnose/debug FPGA using logic analyser, scopes and simulation.
Adapted drivers to use DMA drivers provided and PC emulation with GCC/GDB/DDD.
Integrated software (file access layer and block layer) provided by Samsung to provide file system.
Used company's CVS source control system.

Mobile Handset CRM Contract (Ericsson Mobile Phones Ltd 11/04-02/05)

Skills: CRM, Clearcase, GSM, UMTS, Visual C++, Problem Solving, Perl

Processed Ericsson's Customers' requests adapted code.
Performed source and product merges in Clearcase using Ericsson produced Java/Perl tools.
Processed requests via Ericsson's incident tracking software.
Adapted source code on Ericsson's GSM and UMTS ARM products and PC emulation software for their customers written using Visual Studio in C/C++ and Object C.
Tested and exercised solutions on a evaluation board, on customers handsets and in PC emulation using internal test and calibration software.
Used Company's Clearcase source control system.

Embedded Linux/PowerPC Contract (Accton UK Ltd 06/04-10/04)

Skills: Motorola Book E/E500 core complex (8540), Assembler, Linux Kernel, Device Drivers, JTAG, CVS

Tested bootloader (Motorola U-Boot) and Montavista Linux distribution on a pre-delivered Motorola development board with GPL code using a BDI debugger and JTAG Tools.
Obtained and tested boot loader source for Motorola development board (DENX U-Boot) using JTAG Tools.
Modified bootloader code to add comprehensive scripting engine using Linux GNU tools in embedded C.
Adapted scripting engine to be emulated on both Linux and Windows environments using QT/GNU, Borland command line tools and a Windows emulation in C and C++.
Ported bootloader source to be used on an Motorola router board which the company is manufacturing using GNU tools in embedded C and Assembler.
Wrote driver code in the bootloader to allow network port crossover at TCP layer 2 (MAC) to assist the hardware team in testing using GNU tools in embedded C.
Worked with and supported the hardware and software teams and used the company's CVS source control.

German Project Management Contract (Sci-Worx GmbH 12/03-02/04)

Skills: Project Management, Effort Estimation, MS Project, MPEG4, CVS, Clearcase, Linux

Learned the companys protocols and used technical knowledge for specification negotiation.
Wrote a plan for the client and then follow this through supporting and giving assistance as

necessary.
Re-negotiated deadlines in absence of the program manager.
Learned extra technologies and how they fit with the firmware in order to guide the engineers.
Learn and present implementation details of MPEG4 CODECs to engineers and management.
Used the companys document and code control CVS and Clearcase. Also learned some German.

Direct Reports:10, Indirect Reports:25, Reporting to Project Director.

Senior Project Engineer (Domain Dynamics Ltd 01/02 - 07/03)

Skills: Visual C++, Embedded C/C++, VB, Pocket PC, Matlab,signal processing, Linux, Device Drivers, JTAG, CVS, IT Administration, CVS
Reason Left: Company in severe financial crisis. Made redundant as part of shrinkage. Has since folded.

Wrote signal processing algorithms in Matlab, Visual C++/MFC and embedded C++ using Embedded C++ 3.
Ported Voice authentication C++ application to WinCE/Pocket PC platforms.
Wrote C++ applications for Linux and Symbian (short test project only) to assess platform porting feasibility.
Redesigned and rewrote the current core development kit as an ActiveX SDK in Visual Studio.
Wrote ActiveX sound API driver and LPT device drivers to go with SDK for Win98/2000 in Visual Studio.
Ported a number of algorithms from Matlab to Visual Studio as ActiveX controls.
Adapted to include smart card voice authentication using time warping applet on the card.
Wrote a smart card ActiveX control for use with the applet for voice authentication on a PC in Visual Studio.
Built and maintained a Linux server used for development and was the companys FTP server.
Managed several projects and a small but variable team of project engineers.
Was involved in recruitment and client contract assessment, faced clients, wrote promotional and demo software and documents, involved in marketing campaigns including TV productions for the BBC.
Used to companies CVS source and document control system.

GPRS PC Card Contract (Option International NV 05/01-12/01)

Skills: Real-Time Embedded C/C++, Device Drivers, ARM, Clearcase
Re-wrote PCMCIA embedded boot driver to boot ARM7 card, download FPGA configuration and download CIS via cards system bus from internal memory in target time of 1 second (PCMCIA Spec) in embedded C.
Re-wrote a UART driver for the ARM7 card in real-time embedded C.
Designed a method for in field reprogramming of the firmware using VHDL and embedded C/C++.
Managed some of the companys staff on this project and used the company's Clearcase version control system.

GSM Layer 1 Contract (TTPCom 10/00-04/01)

Skills: Real-Time Embedded C/C++, RTOS, GSM Layer 1, Device Drivers, ARM, JTAG
Built simple OS and device drivers on ARM 940T platform in embedded C and ARM assembler.
Wrote hardware interrupts vector handlers, set-up memory and stacks in ARM assembler

and interfaced functions from the assembler for second layer in embedded C using ARM SDT, JTAG.
Wrote Layer 1 embedded device drivers for LCD display, phone keypad, RF & audio DACs & ADC, JEDEC drivers for flash memory, UART I/O, ALU register access, interrupt controller, PCI Bus controller, plus other system resources in embedded C.
Wrote a user interface menu system application layer in embedded C to be accessed via the primary UART using a terminal emulator.
Wrote bootstrapper which had 2 UART drivers (one user, one debugging) and a flash driver in assembler.
Provided spec for hardware layer to the AMX Kadak kernel to provide a generic (portable) kernel interface.
Used the project version control system (PVCS).

Belgian Embedded RTOS Contract (ERG Transit Systems/AES Prodata 06/00-09/00)

Skills: Real-Time Embedded C/C++, Device Drivers, Motorola 68332, Linux, UNIX.

Wrote applications and device drivers for Motorola 68332 target in real-time embedded C.
Wrote test tools in C++, and upgraded and tested device drivers using Metrowerks in embedded C/C++.
Modified the embedded magnetic card/printer driver to account for unusual ticket loss.
Tested the amended the embedded device drivers on the Motorola target via UNIX debugging suite.
Ported DOS console applications to Windows dialog applications using Visual C++ 6.
Reverse engineered applications to operate on a variety of Windows platforms.
Projects were held on a Solaris UNIX server, were written on a UNIX terminals, Linux PCs and under TEAMWARE source control.

Windows CE Contract (Milton Keynes Council 12/99-05/00)

Skills: Embedded C++, device drivers, Smart Card, WinCE, SQL Server 7, Oracle 8, Visual Studio

Wrote applications that interface with a smart card reader to read and store information on bus passes (smart cards) in Visual Studio and embedded C++ for WinCE 2.11 HPC target (Phenom palmtop).
Implemented a portable system that comprises a HPC device, an ASCII receipt printer and a smart card reader to give the user a portable station to issue, withdraw and update the passes.
Wrote device drivers for the smart card access built up 4-layer stack (hardware/ network/ transport/ application layer) in embedded Visual Basic 3 then in embedded C++ 3.
Wrote management tools using Visual Basic 6 to access the database through an ODBC connection either direct to the Oracle 8 server or via MS SQL 7 Server, enabling the viewing and printing out reports for accounting purposes.

VB/SQL Contract (The Planning Inspectorate 06/99-12/99)

Skills: SQL Server 6.5, MS Access, VB, VBA, ActiveX, Sourcesafe

Adjusted the requirements, high-level and low-level designs and wrote pseudo-code and products.
Managed the team in coding of the application and was responsible for ensuring conformity protocols design.
Assisted in beta testing and user feedback.
Ported and redesigned database from Access to SQL Server using ODBC and Visual Basic 6.
Wrote form based application to integrate MS Word and MS SQL 6.5 Server in VB and VBA.

Wrote database management tools for database administrators to maintain/amend SQL Server letter data in VB/ActiveX using Visual Basic 6 under MS Sourcesafe.

Bangor Website Contract (Bangor City Council 12/98-04/99)

Skills: HTML, TCP/IP, ActiveX, Linux

Worked with the clients to iterate page designs and wrote web pages for Bangor Council and local businesses for IE and Netscape (on SuSE Linux) in HTML using a text editor, an image editor and browsers.
Worked with the ISP to establish a server running ActiveX in London and remotely supported from Wales.

Internet Cafe Contract (The Green Room Cafe 06/98-12/98)

Skills: Linux, TCP/IP, Ethernet, Server and IT Support, CRM, Customer Facing
Set up and ran an Internet cafe from within an existing popular cafe.
Designed and wrote marketing application which presented the company imagery, fired up several productivity applications to replace MS Explorer in C++ and MFC using Visual C++ 5.
Designed and implemented system including network fax server and a proxy firewall server.

Bailrigg FM (at University), 09/96-06/98

Skills: VC++, Borland C
Reason: Left due to degree finish

Reverse engineered the DOS C database system in C++.
Designed an developed database and debug logger database in C++ and MFC using Visual C++ 5.

Help Desk (Lancaster University 01/98 - 04/98)

Skills: NT Administration, UNIX Administration, Customer Facing, Customer Support
Reason: Left due to degree finish

Set up users accounts and solved access problems on Sun Solaris UNIX server and the NT server.
Demonstrated to customers how to access email via ELM and PINE on both UNIX and NT workstations and operate printing services through the NT print server.
The PCs were UNIX disk less terminals, Windows for Workgroups 3.11, NT3.51, NT4.0, and SUSE Linux.

Repair/Conversion/Installation Engineer (Self employed 06/85 - 09/94)

Skills: RF, Electronics, Support, Customer Facing, CRM, 240/415VAC Power, IT Installations
Reason: Finish to start degree

Trained and worked on mains installations, wiring office buildings for mains supply.
Installed IT client/server networks into offices.
Trained, built and repaired RF and audio amplifiers, power supplies also analogue and digital tuning circuits.
Built, repaired and tuned several different designs of antennas including beam and wide-band.

Repaired domestic equipment, repaired and adapted PMR and HAM radios.

EDUCATION

Lancaster University, 09/95 - 06/98

Qualifications: BSc Computer Science

Degree modules included GUI Design, Natural Language Processing, Telecommunications, Presentation & Documentation, Computer Systems Architecture, Communication, High Level Programming, Software Engineering and Databases.
Design methodologies used during the degree included OOD (Object Orientated Design), Waterfall Design, Black Box Testing and CASE Tools.
UNIX experience included Sun Solaris and SuSE Linux.
High level work on Ingress, SQL, C, C++, Visual C++, MFC, Active X, HTML.
Designed and built robot devices in assembler, C, C++ on embedded targets with decision making abilities.
Designed and wrote device drivers for DIO controllers, RS232 ports and 418MHz RF radio modules.

University of Central Lancashire, 09/92 - 06/94

Qualifications: BEng Mechanical/Electronic Engineering

Degree modules included Design and integration of electro-mechanical systems, Energy conversion and actuation systems, Embedded systems and control, Power electronics and electric drives, Energy management, Mathematics, Thermal management, Dynamics and control, Computing, Electrical energy technologies, and Analogue and digital electronics.
Designed and built robotic control systems.
Wrote intelligent embedded systems for autonomous control of vehicles and articulated manipulators.

Lancaster & Morecambe College of Further Education, 09/89 - 06/92

Qualifications: BTEC National Diploma Electronic Engineering Course

Passed at distinction (highest) level: Microprocessor Control, Information Technology, Electronic Principles, Electronics and Mathematics.

School: Heysham High School, Morecambe, Lancashire, 09/78 - 03/85

Qualifications: A Levels, O Levels and CSEs

O Levels: Maths A, Physics B, Computer Studies C, Control Technology B, Technical Drawing C.
A Levels: Maths, Physics, Computer Science, General Studies.
CSEs English II, French II.

INTERESTS AND HOBBIES.

Personal Life

Keen interest in music, cycling, skydiving, weight training, cars (mechanics) and electronics. Host local organisations on private cloud for over 10 years at www.netlinux.co.uk.
Also training IT engineers in Sierra Leone, Africa and building global electric car company www.turbo-electric.com

Other Information

Nationality: ENGLISH, but also speak some French, German and native African languages
Date of Birth: 01/04/1967
Marital Status: Married with 2 Children and live in Reading, UK