Syed Usman Bukhari

Telephone: 07462660889 | Email: usmanbukhari541@gmail.com | Portfolio: usmanbukhari.co.uk

Results-driven Full Stack & DevOps Engineer with extensive experience in designing, optimising, and securing scalable backend systems and cloud infrastructure. Skilled in building robust APIs, automating deployments, and implementing CI/CD pipelines to enhance software delivery efficiency. Proven ability to improve system performance, migrate legacy applications to modern architectures, and enforce best security practices. Adept at leveraging technologies like Kubernetes, Terraform, and cloud platforms to drive operational excellence. Passionate about developing high-performance solutions that ensure reliability, scalability, and seamless user experiences.

Key Skills

Backend Development | API Design & Microservices | Cloud Architecture (AWS, Azure, GCP) | DevOps & CI/CD Pipelines | Infrastructure as Code (Terraform, Ansible) | Python (Django, Flask) | Node.js (Express.js) | C# | PostgreSQL, MongoDB, MySQL | GraphQL, REST, OpenAPI | AWS API Gateway, Lambda, Step Functions | System Scalability & Security (JWT, OAuth2, RBAC, API Rate Limiting) | ETL Pipelines & Data Processing | Performance Optimization & Caching (Redis, CloudFront) | TDD & Continuous Security | Shopify (Liquid) | Containerization (Docker, Kubernetes) | Version Control & Project Management (Git, BitBucket, Jira, Trello)

Career Summary

March 2025 - Present - Contractor   **Ai developer - NHS**

- **Built a generic web scraper using Crawl4AI** to extract healthcare service data from 30+ regional websites, supporting unemployment and healthcare access initiatives in South Yorkshire.
- Engineered a daily **data pipeline** running on **Azure Functions** with queue and timer triggers, automating ingestion, transformation, and enrichment of scraped data.
- Standardised outputs into **AI-ready JSON schemas**, enabling seamless integration with NHS systems and downstream applications.
- Integrated the pipeline with **Azure AI Search** using **vector embeddings** for **semantic retrieval**, improving discoverability and relevance of healthcare services across diverse datasets.
- Deployed a **Microsoft open-source chatbot framework**, connected to the indexed data, allowing citizens to query healthcare/unemployment services via **natural-language search**.
- Applied **LLM-oriented enrichment techniques** (**auto-tagging**, **summarisation**, **service clustering**, and **missing metadata generation**) to improve data quality and categorisation.
- Leveraged **LangChain orchestration** to combine **retrieval-augmented generation (RAG)** with Azure AI Search, ensuring consistent, context-aware chatbot responses aligned to NHS data sources.
- Experimented with **generative AI** for **synthetic data generation** to test pipeline robustness and fill gaps in underrepresented service categories.
- Collaborated with **NHS stakeholders** to ensure the solution aligned with regional healthcare accessibility and unemployment support goals.

Feb 2024 – Feb 2025 - Contractor   **Full Stack & DevOps Engineer** – TSG/Dayta (Sage Partner)

- Designed, implemented, and optimized end-to-end CI/CD pipelines using AWS CodeBuild, CodePipeline, and API Gateway, achieving streamlined deployments and significantly enhanced software delivery efficiency.
- Managed infrastructure-as-code (IaC) using Terraform for scalable, automated, and repeatable cloud resource provisioning on AWS, ensuring consistent environments and infrastructure stability.
- Architected and maintained serverless applications leveraging AWS Lambda and Step Functions to orchestrate sophisticated, event-driven workflows, improving automation and reliability.

- Built robust monitoring and logging solutions to proactively identify and resolve performance bottlenecks and operational issues.
- Integrated security best practices across development and deployment processes by enforcing TDD, continuous security practices, authentication, encryption standards, and comprehensive API security.
- Built and deployed a two-way integration application hosted using Docker and Kubernetes, managed CI/CD processes via GitHub and Jenkins, ensuring robust automation and streamlined continuous delivery.
- Developed and automated internal tools with Flask and React on AWS Amplify, significantly enhancing developer productivity, client support capabilities, and workflow automation.
- Collaborate cross-functionally in Agile teams, continuously improving infrastructure resilience, scalability, and performance.

Key Achievements:

- Automated deployment workflows using Kubernetes & Terraform, reducing downtime by 40%.
- Optimized backend architecture to handle double the traffic load, ensuring zero performance degradation under peak usage.

Jan 2022 – Feb 2024-Contractor   **Full Stack Engineer** – Citadel Health

- **Designed and developed frontend interfaces for Laboratory Information Management Systems (LIMS) using React**, ensuring intuitive user experiences and streamlined laboratory workflows.
- Developed RESTful APIs using Django REST Framework (DRF) and OpenAPI to support high-volume LIMS workflows.
- Designed cloud-native solutions leveraging AWS services (EC2, S3, RDS, Lambda, API Gateway, IAM) to deliver robust and scalable LIMS applications.
- Developed comprehensive API documentation using Swagger and OpenAPI, facilitating improved developer collaboration and efficiency.
- Built Continuous Integration and Continuous Deployment (CI/CD) pipelines using GitHub Actions and Jenkins, automating testing processes and accelerating deployment cycles

Jan 2019 – Jan 2022   **Software/Data Engineer** – Chalkys.com (Shopify)

- Developed a Django API for e-commerce operations (product catalog, order processing, customer interactions).
- Built an AI-driven recommendation algorithm using AWS SageMaker, leveraging ML models to analyse user behavior ,enabling dynamic recommendations such as "Recently Viewed", "You May Also Like" and "People usually buy with", increasing upsell conversions by 25%.
- Implemented an image recognition system using AWS SageMaker and ML techniques to automatically generate a descriptive alt-text and then tagging the product image, significantly enhancing SEO.
- Designed an ETL pipeline, automating competitor price analysis & product data scraping.
- Fully revamped Shopify store to the latest Dawn theme, completely redesigning and rebuilding the frontend to significantly enhance user experience and performance

Jan 2024 - July 2024 - Contractor   **API Engineer** – Anglestack

- Developed serverless APIs using AWS API Gateway, Lambda, and DynamoDB to provide construction companies access to building data.
- Implemented authentication & role-based access control with AWS Cognito for secure API access.
- Built the frontend using React & Next.js, integrating AWS Amplify for deployment and scalability.
- Managed source control and CI/CD workflows using Bitbucket, ensuring efficient collaboration and deployment.

Education and Professional Training

AWS Solutions Architect Certification – eCareers
AWS Cloud Practitioner Certification
Data Engineering Program – Ai Core
Shopify Course – SuperHi
BSc Engineering Mathematics – University of Bristol
Portfolio
Explore my projects and technical contributions at: usmanbukhari.co.uk