UMER RAJA
Portfolio / Github / LinkedIn
Manchester / British
SC & NPPV3 Cleared

PROFILE

I am an innovative and agile cloud native Lead Full Stack Software Engineer. I have 8+ years of experience in leading development teams and delivering high-performance, scalable applications. Proven expertise in Typescript, React, Vue, Go, C#, Java and Python across cloud platforms (AWS, GCP, Azure) and microservices architecture. Skilled in event-driven design, CI/CD pipelines, and mentoring engineering teams to achieve technical excellence. Passionate about driving continuous improvement and delivering product-focused solutions.

TECHNICAL SKILLS

- **Languages/Frameworks**: TypeScript, C#, Python, React, React Native, Vue, NodeJS, Golang, Java, Spring Boot, Solidity, Objective-C, Kotlin
- **Cloud/DevOps**: GCP, AWS, Azure, Docker, Kubernetes, Terraform, Terragrunt, Serverless Framework, CI/CD, GitLabCI, GitHub Actions
- **Architecture/Design**: Microservices, Event-Driven Systems, Event sourcing, CQRS, Saga pattern, System Architecture, Database Normalisation, Software refactoring and design patterns, SOLID, DRY, Domain driven design, Object Orientated programming, Functional programming
- **Tools & Technologies**: GraphQL, TypeGraphQL, Prisma ORM, PostgresQL, MongoDB, gRPC, Apigee, MQTT, Unity, Xcode, Playwright, TDD, ServiceNow
- **Certifications**: ITIL Foundation, Agile Foundation, Azure AI Fundamentals, OWASP

PROFESSIONAL EXPERIENCE

Oval3 (web3) - Technical lead
June 2024 - current

Led a team of 4 engineers developing a rugby gaming product on blockchain technology, implementing technical excellence and fostering team growth.

- Implemented best practices including Monorepo structure, standardised logging across microservices, and event-driven design patterns
- **Reduced cloud operating costs by 49%** (from £4,381 to £2,221) by converting App Engine instances to Cloud Run
- **Improved website performance by 95%** (Lighthouse score from 43 to 84) through technical debt reduction and GraphQL layer refactoring
- Established Infrastructure as Code using Terraform and implemented CI/CD pipelines with defined branching strategy
- Enhanced security by migrating from public IPs to private IPs and VPC connections across all services
- Implemented modular maintenance mode using Firestore

- Completed end-to-end Stripe integration for alternative payment processing
- Refactored legacy code using design patterns (Factory, Decorator) and improved Seaport order handling during network congestion
- Developed comprehensive documentation and implemented end-to-end testing with Playwright and MetaMask integration
- Created dynamic NFT generation system using SVG templates
- Automated manual processes through APIs

Technologies utilised: GCP, Firebase, Vue/Nuxt3, TypeScript, NodeJS, GraphQL, PostgreSQL, TypeORM, AdonisJS, Prisma, Docker, Terraform, GitLab, and Playwright.

eBay (web3) - Senior Software Engineer
March 2022 - February 2024

Developed blockchain-based solutions for NFT capabilities and built powerful data processing systems.

- Introduced V3 smart contracts supporting ERC721 and ERC1151 standards for NFT minting with early access capabilities
- **Built a multichain EVM indexer processing 21 million blocks in 4 hours**, featuring event-driven design and serverless architecture
- Implemented CQRS pattern with GraphQL resolvers for reads and cloud functions for database writes
- Designed and created an event-driven notification system with comprehensive stack monitoring
- Developed Artist Dashboard visualising blockchain data, allowing artists to track sales, revenue, and collector metrics
- Integrated Intercom across all sites to enhance customer communication channels
- Created and deployed automated CI/CD pipelines and added Terraform modules with Terragrunt for cloud infrastructure
- Established end-to-end build-to-deployment pipelines for microservices architecture

Technologies utilised: GCP, TypeScript, VueJS, Nuxt3, NodeJS, GraphQL, TypeGraphQL, PostgreSQL, Prisma, Intercom, Docker, Kubernetes, Helm, Terraform, Terragrunt, and GitHub Actions.

Fujitsu Ltd – Software Engineer
January 2018 - March 2022

Delivered multiple high-impact projects spanning government solutions and cutting-edge mobile applications.

Government Project Backend App using Go

- Helped implement microservice architecture using Go
- Engineered system to process 6 million 12MB WSQ file requests within a 12-hour window
- Diagnosed and improved system performance through memory profiling (pprof) to identify execution bottlenecks

Technologies utilised: Go, gRPC, MongoDB, NATS, StatsD, DynaTrace, EC2, Puppet, Packer, Terraform, Docker, and GitLab CI/CD.

Government Project PoC Mobile App using React-Native

- **Led a team of 7 developers** as Technical Lead, providing mentorship to graduate engineers
- Selected development framework and assisted with architecture design and end-to-end integration
- Implemented complex image manipulation using OpenCV and created native plugins in Java
- Designed serverless, event-driven architecture with dynamic parallelism through Step Functions and EventBridge
- Implemented Saga pattern with choreography and event sourcing

Technologies utilised: React-Native, TypeScript, Java, OpenCV, TensorFlow, AWS services (S3, EventBridge, Step Functions, Rekognition, API Gateway, Lambda, DynamoDB, SNS), Firebase, and GitLab CI/CD.

Augmented Reality Mobile App using Unity

- Collaborated within a globally distributed team of 6 developers on a cross-platform self-help AR application
- Managed fortnightly releases to Apple and Google stores and created detailed architecture design documents
- Created network manager, manages offline/online states and current device connectivity
- Found solutions to technical constraints from both a hardware and software perspective
- Implemented user roles with IAMS, developed platform-dependent plugins using native code, and created custom shaders
- Built MQTT integration with IoT clients and implemented interoperability between iOS applications
- Created custom webhooks feature, ability to interact with external APIs via the app
- Showcased application at Fujitsu World Tour, demonstrating innovation and business value

Technologies utilised: Unity, C#, Java, Objective-C, xCode, CloudFormation, Elastic Beanstalk, S3, MQTT, APIGEE, ServiceNow, and Node-Red.

EDUCATION

2013 - 2016 Sheffield Hallam University, Sheffield BSc (Hons) IT and Business: 2.1

INTERESTS & HOBBIES

Blockchain/Crypto - I like to keep up to date on the latest blockchain technologies and use cases. This includes their ecosystems and how they solve real world problems

Electronics - I am keen in creating new ways of interacting with devices, by reverse engineering circuit boards and adding modifications to the PCB to add new functionality

Woodwork – I have a passion for creating items made from wood and hope to improve my craftsmanship