MANOHARAN THUSHANTHA SANJU

Full-Stack Software Engineer

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LinkedIn | GitHub | Portfolio

Right to work in the UK until September 2028.

PROFILE

Full-stack software engineer with more than five years of experience writing readable, well-tested web applications in TypeScript and React, with back-end services in Python, Java and Node.js. Works with PostgreSQL, Redis and MongoDB, improved p95 latency by around 30% through indexing, caching and asynchronous processing, and has built a command-line tool in Rust. Reviews code through pull requests and takes pieces of work from design to production. MSc in Artificial Intelligence and Human Factors with Distinction.

TECHNICAL SKILLS

Full stack: TypeScript, React, Next.js, JavaScript, Node.js, Python, FastAPI, Java, Spring Boot, Rust, REST, GraphQL
Data: PostgreSQL, schema design, indexing, query optimisation, Redis, caching, MongoDB, Kafka, Pub/Sub, asynchronous processing
Quality and operations: Jest, pytest, JUnit, code review, GitHub Actions, Docker, Kubernetes, AWS, structured logging, correlation IDs, monitoring

PROFESSIONAL EXPERIENCE

CueCard AI | Software Engineer | San Francisco, USA (Remote) | Jan 2025 - Jul 2026

- Shipped TypeScript applications and Python services for content and workflow automation, integrating external APIs behind modular service boundaries.
- Built LLM agents with tool calls and evaluation checks into production workflows, validating model output before it reached customers.
- Defined REST and OpenAPI contracts with request validation and idempotency, and backed Java and Spring Boot services with automated tests and health checks.
- Implemented streaming workflows that cut content production time by around 50% and increased engagement by around 35%.
- Diagnosed failures using structured logs, monitoring and service health data to help sustain 99.9% uptime through launch.

Bconic | Software Engineer | Toronto, Canada (Remote) | Aug 2024 - Jan 2025

- Shipped a workflow automation platform across Next.js, React, TypeScript, Node.js and Java, reducing customer setup time by around 45%.
- Built a visual workflow builder and email automation pipelines used by end customers, with reusable components for forms, workflow state and validation.
- Modelled event data in PostgreSQL and built streaming analytics with read models tuned for aggregate queries and operational reporting.
- Created reusable validation and integration patterns, and protected releases with pull requests, CI checks and regression tests.
- Partnered with product and marketing on workflow steps, analytics outputs and release priorities, iterating from user feedback.

Level 33 Solutions | Software Engineer | Brasilia, Brazil (Remote) | Jun 2023 - Jul 2024

- Implemented React and TypeScript clinical workflows backed by Java and Spring Boot services across REST and GraphQL APIs.
- Modernised a hospital management system with React clinical workflows and backend microservices across patient and operational journeys.
- Improved p95 latency by around 30% through indexing, query optimisation, caching and asynchronous processing.
- Instrumented validation, exception handling, correlation IDs and structured logs so production failures could be traced across services.
- Partnered with product owners to decompose complex requirements and reduce delivery risk across a remote team.

OREL IT | Trainee Software Engineer | Colombo, Sri Lanka (Hybrid) | Apr 2021 - Jun 2023

- Owned Docker-based CI/CD pipelines with GitHub Actions and Jenkins, reducing deployment time by around 60%.
- Delivered React, Node.js and Express features backed by REST APIs and SQL services for enterprise application workflows.
- Wrote unit, integration and regression tests and shipped production fixes while services migrated to a modular architecture.
- Reviewed changes through Git-based workflows and diagnosed production issues on Linux-based services.

INDEPENDENT ENGINEERING WORK

Independent Software Engineer | self-employed | London, United Kingdom (Remote) | Jul 2026 - Present

- Built and shipped independent full-stack and AI products, owning backend services, data models, deployment, monitoring and production fixes.
- Designed FastAPI and TypeScript service boundaries, PostgreSQL and SQLite data flows, strict schema validation and rate-limited integrations.
- Instrumented automated tests, GitHub Actions, structured logs and trace views so failures could be reproduced and corrected quickly.
- Released working products through GitHub and a public portfolio, with source, deployment notes and technical decisions available for review.

SELECTED ENGINEERING PROJECTS

CVForge | GitHub | Next.js, TypeScript, PostgreSQL, Redis, Stripe

- Shipped the product independently, including authentication, subscription billing, usage limits, database security policies, monitoring and CI.
- Implemented Stripe Checkout, Customer Portal and signed webhooks, with database access rules and Redis limits controlling tier allowances.
- Validated model output with JSON Schema and Zod so invalid responses failed before reaching downstream application code.
- Integrated Sentry monitoring and CI checks around account, billing and model-backed workflows to make production failures visible.

Pier | GitHub | Rust, GitHub Actions

- Designed a cross-shell command-line project switcher with deterministic environment loading and per-project setup commands.
- Added 36 unit and integration tests, tagged releases and CI that treats lint warnings as errors.
- Kept the tool daemon-free with a native binary and predictable environment parsing across bash, zsh and fish.

Scout | GitHub | Python, FastAPI, SQLite, ChromaDB, Next.js, Docker

- Built a Python agent loop with explicit planning, native tool calls, retry budgets, failure thresholds and exit conditions.
- Sandboxed Python execution with timeouts and resource limits, and recorded every tool call as a structured SQLite event for trace inspection.
- Introduced byte-capped retrieval, per-user memory and a versioned evaluation harness so failures and behavioural changes could be compared across releases.
- Exposed run history through a Next.js trace viewer so individual tool inputs, outputs and failure paths could be inspected without reading server logs.

AskFastAPI | GitHub | Python, FastAPI, ChromaDB, Next.js

- Combined BM25 and semantic retrieval with Reciprocal Rank Fusion, and reranked 20 candidates to five passages with a cross-encoder.
- Streamed answers with inline citations linked to source sections, and retained heading metadata through the retrieval pipeline.
- Created a 25-question evaluation harness for retrieval quality, faithfulness, citation accuracy and latency.
- Separated retrieval, reranking and answer generation behind FastAPI endpoints so each stage could be tested and changed independently.

Reliable ICD Code Recommendation | GitHub | Python, PyTorch, Transformers

- Built a transformer-based clinical text pipeline that recommends ICD-10 codes from unstructured notes.
- Introduced calibrated prediction sets and token-level explanations so reviewers could inspect supporting evidence and uncertainty.
- Evaluated the system as decision support, keeping uncertain predictions reviewable rather than presenting them as automatic clinical decisions.

EDUCATION AND PUBLICATION

MSc Artificial Intelligence and Human Factors | Coventry University, UK | 2025 - 2026 | Distinction

BSc (Hons) Information Technology, Software Engineering | SLIIT, Sri Lanka | 2020 - 2023 | Second Class Lower Division

Publication: Stock-Crypto-App: Recommendation System for Stock and Cryptocurrency Market Using Cutting Edge Machine Learning Technology. IRJIET, 7(9), 110-117, 2023. | DOI

ADDITIONAL EMPLOYMENT

Royal Mail | Postperson | London | Aug 2026 - Present

Chapter One | Front of House | London | Aug 2025 - Aug 2026