

TAKINUR MAHIM

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SUMMARY

Software engineer with ~2.5 years' commercial experience across freelance and contract work, alongside an MSc in Data Science. Ships end to end: Python (FastAPI, Django) backends, React/Next.js frontends, AWS deployment with GitHub Actions CI/CD. Currently builds retrieval-augmented (RAG) LLM systems and anomaly-detection pipelines at F2A.

SKILLS

AI/ML: PyTorch, TensorFlow, Scikit-learn, Pandas, RAG, vector search, NLP, OpenAI & Claude APIs

Backend: Python, Django, FastAPI, Node.js, PostgreSQL, REST, GraphQL, SQL

Frontend: React, Next.js, TypeScript, Tailwind CSS

DevOps: AWS (EC2, S3, RDS, Lambda), Docker, Linux, GitHub Actions, CI/CD

Practices: Agile/Scrum, TDD (Pytest, Jest, Cypress), API design, technical documentation

PROFESSIONAL EXPERIENCE

Software Engineer | F2A Partner (Remote) March 2025 – Present

- Built and shipped a retrieval-augmented (RAG) HR assistant over the company's internal policy library, retrieving the relevant policy sections and generating grounded answers to employee questions; handles several hundred queries a week.
- Developed an anomaly-detection pipeline that flags payroll discrepancies before processing, cutting manual review load for the finance team.
- Rebuilt the company's public site in Next.js with React Server Components and SEO optimisation, improving page load performance by 20%.
- Replaced a two-hour manual deployment with a GitHub Actions CI/CD pipeline to AWS EC2 and Lambda, bringing release time down to ~20 minutes.

Freelance Software Developer | Self-employed, Upwork (Remote) Sept 2022 – Aug 2023

- Delivered web and API projects for ~20 clients, from feature builds to performance work on existing codebases.
- Built a commercial parts-finder web application for EU boiler manufacturer Eccotemp, matching compatible replacement parts across product lines.
- Contributed to a long-running microservices build with a five-engineer team across Python, TypeScript, PHP and JavaScript; wrote API specs and technical documentation, working to TDD on larger engagements.

Foods Section Manager, Part-time | Marks and Spencer (London) Sept 2023 – Present

- Lead a small team on a trading section; own daily operational reporting and stock/waste analysis.

PROJECTS

Federated Siamese GRU Network Intrusion Detection in EV Stations 2025–26

Python, PyTorch, TensorFlow, Scikit-learn, Pandas

- Engineered a privacy-preserving IDS using a Siamese GRU architecture on the CICEV-2023 dataset to protect EV charging infrastructure.
- Used system telemetry rather than network logs to detect stealthy Gaussian and non-Gaussian DDoS attacks that evade conventional network-based detection.

Network Intrusion Detection with Few-Shot Learning github.com/takinur/NIDS · 2025

Python, PyTorch, TensorFlow, Scikit-learn

- Developed an anomaly detection model using Few-Shot Learning (Siamese Networks) to identify zero-day network attacks with limited training data.
- Achieved 94% detection accuracy on 5 unseen attack classes, outperforming a supervised XGBoost baseline by 11pp, validated via 5-fold cross-validation.

Talent Screening AI github.com/takinur/skirmisherAI · 2023

Python, Django, React, NLP, PostgreSQL, TensorFlow

- Built a single-page application with RESTful APIs to automate resume screening and predict candidate suitability with 93% accuracy on a 45k-record dataset.
- Deployed a TensorFlow neural network with NLP extraction of skills, experience and education from CVs; unit and integration tested to 90% coverage.

EDUCATION

MSc Data Science | University of Westminster | 2023 – 2024

BSc (Hons) Computer Science | University of Greenwich | 2020 – 2023