Nathaniel Sebastian

Graduate Software & Applied AI Engineer | Python, APIs & Client Delivery

Cardiff, UK | Open to London relocation and client travel
nathannn.s04@gmail.com | github.com/NathS04 | LinkedIn | Future / Portfolio
UK citizen - unrestricted right to work; no sponsorship required | Available immediately

PROFILE

Computer Science with Artificial Intelligence graduate (2:1, University of Leeds) combining Python development, applied AI and paid client delivery. Built an evaluated document-QA system, a tested backend API and traceable data pipelines. Comfortable clarifying requirements, investigating failures and explaining technical choices to non-technical users.

TECHNICAL SKILLS

Programming & web: Python, SQL, JavaScript, HTML/CSS; C++ (academic), Java fundamentals
APIs & data: FastAPI, REST, PostgreSQL, SQLite, SQLAlchemy, pandas, ingestion, JWT/RBAC
Applied AI: RAG, BM25/dense retrieval, reranking, citations, evaluation, Streamlit
Engineering & delivery: pytest, Git, GitHub Actions, Ruff, mypy, Bandit, debugging, requirements discovery, demonstrations and technical documentation

SELECTED PROJECTS

Policy Copilot - Evidence-Grounded AI | Code
Academic dissertation | Python, RAG, retrieval, verification, Streamlit
- Built policy-document question answering with retrieval/reranking, paragraph citations, claim checks and confidence-gated abstention when evidence was insufficient.
- Designed a 63-question synthetic benchmark and a 292-test core suite; a documented offline run recorded 290 passes and two conditional skips. Used audit traces to analyse grounding versus answer coverage.

EventHub - API & Data Integration | Code
Academic project | Python, FastAPI, PostgreSQL, SQLAlchemy, REST
- Built and deployed a 24-endpoint event/RSVP API with JWT authentication, owner/admin controls, Leeds City Council imports and source-provenance tracking.
- Created 84 automated tests with approximately 95% coverage; added GitHub Actions CI, linting, static typing and security checks.

Ledger Data Quality & Reconciliation | Code
Personal project | Python, pandas, SQL, SQLite | Synthetic data
- Standardised 10,150 synthetic transactions into SQLite; checked completeness, duplicate candidates and vendor references, and reconciled against independent control totals using a £0.01 tolerance.
- Produced traceable exception reports, KPI outputs and concise findings to support investigation and downstream reporting.

Additional academic work: Python search engine with crawling, positional indexing, TF-IDF, phrase search and spelling suggestions; C++/OpenGL graphics with camera, lighting, geometry and animation.

COMMERCIAL EXPERIENCE

Freelance Web Developer - Delikatesy Miś | Apr-May 2023
- Won a paid retailer website project through direct outreach, gathered requirements and delivered an HTML/CSS/JavaScript site over roughly six weeks.
- Led three review demonstrations, translated non-technical feedback into changes and completed the engagement with client acceptance and payment.

EDUCATION

University of Leeds - BSc Computer Science with Artificial Intelligence | 2023-2026
2:1 Honours. Relevant study: Machine Learning, Data Mining, Databases, Software Engineering, Secure Computing and Web Services.
Stanwell School: Mathematics A, Computer Science A, Further Mathematics B; Welsh Baccalaureate A*.