

PATRICK O'REILLY

oreillypatrick@gmail.com | (085) 188-6102 | Galway, IE | [LinkedIn](#) | [GitHub](#)

First Class Honours CS student with two HPE internships building agentic AI services on Docker and Kubernetes. Seeking a graduate software engineering role from September 2027.

EDUCATION

University of Galway

Sept 2023 – Present

B.Sc. Computer Science & Information Technology | First Class Honours (Years 1–3)

Galway, IE

- **Relevant Coursework:** Advanced Programming (93%), Data Comms & Networking (92%), Programming Paradigms (90%)
- **Scholarships:** Excellence Scholarship (2023–24); University Scholar (2024–25) for top-tier examination results

Coláiste Éinde

Sept 2017 – June 2023

Leaving Certificate | 625 points (maximum)

Salthill, Galway

TECHNICAL SKILLS

Languages: Python, C#, Java, C, TypeScript, Swift, SQL (PostgreSQL)

Backend & Cloud: Docker, Kubernetes, AWS (Lambda, DynamoDB, S3), GCP, Spring Boot, FastAPI, React, REST, OAuth, CI/CD

AI & ML: Agentic AI, Multi-Agent Systems, RAG, MCP, LangGraph, Google ADK, scikit-learn, Vector Search, LLM Evaluation, Langfuse

Practices: TDD (PyTest), Agile, System Design, SOLID, Data Pipelines, Production Monitoring, Regression Testing

WORK EXPERIENCE

Hewlett Packard Enterprise

Galway, IE

Innovation Engineering AI Intern (part-time from Sept 2026)

Jan 2026 – Present

Python, LangGraph, Google ADK, MCP, PostgreSQL, Docker, Kubernetes, OAuth, Langfuse

- Rapidly prototype AI proofs of concept and present them to executive leadership, including CTOs, before production handoff.
- Co-built an AI tool turning a manual spreadsheet process into customer upgrade insights in seconds; now being productised.
- Key contributor to the innovation team's fastest-ever proof of concept to reach the product roadmap.
- Designed autonomous multi-agent systems and tool-augmented LLM workflows in Python to automate complex processes.
- Containerised microservices with Docker on Kubernetes, securing service-to-service traffic with token-based OAuth.
- Engineered an MCP data retrieval service on PostgreSQL with vector schemas, serving low-latency context downstream.
- Own staging-to-production releases, running regression suites and compliance checks to prevent live regressions.
- Upgraded an internal team website and recorded tutorials so a colleague could maintain it independently after handover.

Software Engineer Intern

June 2025 – Aug 2025

Python, LangGraph, Kubernetes, RAG

- Co-developed a LangGraph agent for Kubernetes workload failure remediation, extracting actionable insights from cluster logs.
- Extended the workflow with RAG and persistent memory for context-aware, multi-turn troubleshooting conversations.

CliftonStrengths (HPE team assessment): Connectedness, Relator, Empathy, Adaptability, Developer (Relationship Building)

PROJECTS

Ascend – AI-Powered Study Platform

Team of 3 Engineers

Java, Spring Boot, AWS (Lambda, DynamoDB, S3), Google ADK, React, TypeScript

- Built 2 of 5 serverless microservices (notes ingestion, AI content generation) plus their React frontend.
- Implemented a Google ADK agent converting PDF/text into structured notes and auto-generated quizzes.
- Designed S3-backed PDF storage with presigned URLs and PDFBox text extraction.

What Next? – AI Multiplayer Narrative Engine

Independent

Swift, iOS, Vercel (Serverless), Generative AI

- Built an iOS AI story engine for 10 concurrent players with a serverless state API that syncs game state and story progression.
- Designed quorum-based voting with host-side timestamp verification to eliminate race conditions on concurrent submissions.

Route Scouter – Conversational Running Route Agent

Independent

Python, Google Cloud, Google Maps API, Conversational AI

- Built a conversational agent recommending running routes by distance and location from natural-language queries.

Multi-Agent Software Diagnosis System

Final Year Project – 2026/27

Python, LLM Agents, SWE-agent / mini-SWE-agent, Benchmarking

- Will test whether specialist LLM agents (architecture, testing, performance, docs) beat one generalist agent at diagnosis.
- Planned benchmark harness over ~70 real student repos, with a coordinator agent ranking findings and precision/recall scoring.

PERSONAL ACHIEVEMENTS

- **Academic:** maximum 625 Leaving Cert points; competed nationally in IMTA Senior Maths and ISTA Senior Science team events.
- **Public Speaking:** presented AI prototypes to HPE executive leadership (incl. CTOs); gave a university tech talk (lectured to 100+ students at ATU)
- **Chess:** Connacht team member on Chess.com. **Running:** completed the Great Limerick Run Half Marathon.