Fergal Riordan

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Profile

AI Engineer with **1 year of professional experience building production-ready AI systems for B2B SaaS**, and **∼2 years of freelance experience in RLHF-based AI data annotation**. Experienced in agentic AI, LLM tool orchestration, OCR pipelines, and generative model research, with First-Class Honours MEng and BEng degrees in Electronic and Computer Engineering from Trinity College Dublin.

Technical Skills

Languages:	Python, SQL, C
Frameworks & Libraries:	PyTorch, LangChain, LangGraph, Pandas, NumPy
Developer Tools:	Microsoft Azure, Cosmos DB, Docker, Git, Azure AI Services, Azure OpenAI
Key Competencies:	Agentic AI, Generative AI, ML Research, Model Fine-Tuning, Prompt Engineering

Experience

AI Engineer May 2025 – Present

Channelscaler *Galway, Ireland*

Overview of AI Features

Python, Microsoft Azure, Azure OpenAI API, Azure Document Intelligence, Cosmos DB

- Co-developed the platform's first AI agent for deal registration, automating validation and duplicate detection workflows, significantly reducing manual review time for operations teams.
- Architected agent orchestration, implementing tool-usage functionality for autonomous actions.
- Enhanced an OCR-based invoice auditing pipeline using Azure Document Intelligence by fine-tuning key-value extraction models and expanding field coverage to support additional audit checks.

AI Data Annotator Sep. 2023 – May 2025

Data Annotation Tech *Remote, Ireland*

Python, Prompt Engineering, RLHF

- Trained and refined AI coding agents using RLHF and prompt-engineering techniques.
- Selected for a domain expert team following consistent high performance, contributing to evaluation of AI coding assistants for advanced computer science and IDE-integrated workflows.

Research & Selected Projects

Master's Thesis: Enhancing CycleGAN for Day-to-Night Image Translation Sep. 2023 – May 2024

View Project

Python, PyTorch, GANs, Transfer Learning, Computer Vision, Deep Learning

- Implemented custom PyTorch architectures to improve a baseline CycleGAN model for day-to-night image translation, experimenting with shared generators and a novel timestamp conditioning strategy.
- Achieved an improvement of 20% on the Kernel Inception Distance metric over the baseline model.
- Earned a First-Class Honours grade of 82% for the research.

Education

Trinity College Dublin Dublin, Ireland

Master of Engineering & Bachelor of Engineering in Electronic & Computer Engineering *Sep. 2019 – May 2024*

- MEng: First-Class Honours (1.1), 80%
- BEng: First-Class Honours (1.1), 72%
- Erasmus semester at the University of Iceland, Reykjavik

Christian Brothers College Cork, Ireland

Leaving Certificate *Sep. 2013 – Jun. 2019*

- Ranked in top 70 students nationally - 625/625 points (7 H1 grades)