# 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

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| **Languages:** | Python, SQL, C |
| **Frameworks & Libraries:** | LangChain, LangGraph, PyTorch, Pandas, NumPy |
| **Developer Tools:** | Microsoft Azure, Azure AI Services, Azure OpenAI, Cosmos DB, Docker, Git |
| **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*
- Improved CycleGAN performance for day-to-night image translation using transfer learning, a content-style disentangling scheme, and a novel timestamp conditioning architecture.
- 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)