# LUKE KIRWAN

## FULL STACK SOFTWARE ENGINEER

## CONTACT

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4/3 Gosbell Street, NSW 2021

## SKILLS

### Technical

Programming languages: Python (advanced), TypeScript (advanced), Java (intermediate)

Full-stack engineering: front-end, back-end, REST APIs & testing

Cloud engineering: security, networking, storage, containerisation & monitoring

Data engineering: databases, caching, decoupled & event-driven architectures

DevOps: continuous integration & delivery, infrastructure as code, shell scripting & automation

### Behavioural

Problem solving

Stakeholder engagement & presenting

Communication & time management

Translating technical concepts

Adapting to new environments & learning new technologies

## EDUCATION

### Certifications

AWS Certified Solutions Architect - Pro

AWS Certified Solutions Architect - Assoc.

AWS Cerified Cloud Practitioner

### University of Bristol

Fintech with Data Science - MSc (Distinction)

### University of Bath

Mathematical Sciences - BSc (First Class)

## INTERESTS

Sport: football, cycling & snowboarding

Travel & sustainability

## PROFILE

Proactive and innovative technologist with extensive full-stack development experience and a proven track record designing and delivering cloud-based solutions. Expertise spans multiple programming languages and cloud platforms, with a primary focus on Amazon Web Services (AWS). Thrives in fast-paced environments, leveraging enthusiasm, collaboration, a hunger to learn, and a rigorous commitment to quality.

## WORK EXPERIENCE

### Manager - Data & Digital

Scyne Advisory (formerly PwC), Sydney — Feb 2023 - Current

- Acts as an internal subject matter expert in cloud solution architecture and full-stack engineering, focusing on building real-time data analytics platforms for government clients.
- Co-led the build of an AWS-hosted internal platform-as-a-service, powering proof-of-concept and production-ready applications with integrated best practices and guardrails.
- Designed and built a real-time analytics platform in AWS to support monitoring and maintenance of road networks in New South Wales (NSW). Phase 1 involved designing a scalable cloud architecture capable of ingesting and aggregating terabytes of data, presenting it to key stakeholders for sign off, and building the solution. Phase 2 focused on leading a team of four to develop a map-based website for visualising data. The stack included a serverless ingestion pipeline, an OLAP data warehouse for complex queries, an OLTP database acting as a cache for the website (which required geospatial query capabilities), a Node.js (TypeScript) REST API, and React frontend. Key responsibilities included architectural design, full-stack development, code reviews, release management, and client demos.
- Led the design and development of a highly available, serverless platform in AWS for curating high-quality, crowd-sourced labelled datasets for machine learning. The stack included a custom JavaScript interface deployed to Amazon Mechanical Turk and a serverless application for authenticating requests, serving data to the labellers, and reviewing submission quality. The platform was used to curate a labelled road image dataset to train a machine learning model for detecting cracks and potholes.
- Designed and built a real-time platform for AI driven object detection on CCTV camera feeds, which was used to identify different classes of vehicle and infer their speeds and trajectories.
- Designed and built a highly secure, Azure based natural language processing application for extracting key information from unstructured, anonymised medical records.
- Supports hiring by conducting technical interviews and vetting graduate applications.

### Senior Software Engineer

Stratiphy, London — May 2022 - Feb 2023

- Developed software for early stage startup to bring automated trading strategies to retail investors.
- As part of a small team it was essential to wear many hats. Contributed to product strategy, design and funding initiatives alongside core software engineering responsibilities.
- The primary components of the technology stack were a Postgres database, a Redis cache, and a containerised Python (Django) REST API deployed on AWS.

### Software Engineer

Deutsche Bank, London — June 2018 - Sept 2021

- Integral member of an agile development team implementing test-driven-development.
- Rapidly learned and implemented containerisation technologies (Docker & Kubernetes) to migrate a highly secure Corporate Finance application in to the cloud and introduced CICD.
- Injected energy into a legacy team and promoted a collaborative approach to development.
- Trained and mentored several graduates, and participated in three hackathons.

### Football Systems Operator

Hawk-Eye Innovations, UK — June 2017 - June 2018

- Operated and tested goal-line and video-assisted-refereeing technology in the Premier League and Champions League.