James Kelly

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Education

University of Limerick

BSc/MSc Immersive Software Engineering (ISE)   2023–2027

○ Relevant modules: Machine Learning, Databases, Object-Oriented Design, Cyber Security, GIT, AI

Work Experience

Avtrain

Software Engineer   2025–Present

○ Was a sole developer in a startup where I developed and maintained a full-stack application using Flask and PostgreSQL, achieving a reduction in manual effort.
○ The application was made to streamline operations manual generation, including automated compliance checking.
○ Effectively communicated with stakeholders about plans, progress, and blockers.

Keeper Solutions

Software Engineer   2024–2025

○ Contributed to the AI-lab project involving machine learning using tools such as Langfuse and Ollama.
○ Created a customizable Confluence RAG model that was able to retrieve information from the desired Confluence instance and then queried via an open web UI interface, before being distributed to customers.
○ Developed collaboration skills through teamwork and GitHub.

Projects

Dengue Virus Prediction Model:

○ Group project where I took control of data analysis and model selection.
○ Delivered user-friendly dashboards, graphs and tables for case visualisation.

Sleep Quality Prediction:

○ Developed a model to improve users' sleep quality using linear regression and dataset from Hugging Face.
○ Created a UI for user data input which enabled tracking and personalised sleep improvement advice.

Motion Sensor Device:

○ Programmed Arduino setup with motion sensor and alarm for our Human Computer Interaction Module.
○ Automated notifications via Telegram API using IoT technologies such as Bluetooth and Wi-Fi connection via hotspot.

Skills

Technical: Java, Python, Git, Object-Oriented Programming, C++, CI/CD

Professional: Problem-solving, communication, leadership, ambition

Achievements

○ Winning the Intermediate Football Club Championship
○ JJ Winning in STEM2D University Programme Winner
○ Nomination for 'Best Emerging Aviation Technology' Award 2025 .
○ President's Volunteer Award for charity hackathon with Limerick Learning Hub.