RAZVAN GOREA

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EDUCATION

DUBLIN CITY UNIVERSITY

B.Sc. IN COMPUTER SCIENCE

PROJECTS

Multi Agent Large Language Model Application

- Developed a full-stack multi-agent LLM system using **LangGraph**, **Mistral**, and **Pinecone** to query multiple datastores via a centralized retrieval-augmented generation (RAG) workflow.
- Built an intuitive chatbot interface using **Next.js** and **FastAPI**, allowing users to interact with LangGraph agents in real time.
- Implemented a **GitLab CI pipeline** (YAML) to build, test, and deploy both frontend and backend components.
- Achieved **85% test coverage** using **Jest** and **Pytest**, integrated into the CI pipeline.
- Secured **Pinecone** namespace access with user permission policies and metadata tagging to ensure safe and scoped access to vector indexes.
- Containerized the application using **Docker** for consistent development and deployment environments.
- Collaborated with a project partner in **weekly agile sprints** to deliver new features, fix bugs, and refine documentation.
- Provided regular project updates and discussed potential bottlenecks with a supervisor via weekly **in-person and Zoom meetings**.
- Managed version control with **Git**.

Weather & Outdoor Trails Application

- Developed a **React + React Leaflet** web application to display walking, hiking, and cycling trails across Ireland alongside live weather data.
- Integrated external weather API (**OpenWeatherMap**) to provide real-time weather updates.
- Collaborated with a project partner to define features and functional requirements based on user stories.
- Managed version control with **Git**.

University Management Application

- Built a **React** application that enables administrators to manage modules, cohorts, and student records through an intuitive UI.
- Integrated custom **RESTful API** endpoints to support full **CRUD** operations across different academic entities.
- Designed modular, reusable components to support scalable feature development.
- Managed version control with **Git**.

Pizza Ordering Application

- Created a **Django** application with an **SQLite** backend allowing users to customize and order pizzas with selectable toppings, sauces, and crust types.
- Designed form-based interactions and implemented model validations for robust order handling.
- Managed version control with **Git**.

Shell

- Developed a UNIX-style shell in **C** capable of executing common Linux commands in both batch and background modes via forked processes.
- Implemented command parsing, error handling, and I/O redirection.
- Automated build process using a custom **Makefile**.
- Wrote comprehensive end-user documentation in **Markdown**.
- Managed version control with **Git**.

RELEVANT EXPERIENCE

DCU Insight Centre

Intern   *Jan 2024 - Mar 2024*

- Conducted research into designing a unified system for querying diverse datastores and databases to address data organization and demand forecasting challenges.
- Collaborated with stakeholders to gather requirements, identify key problems, and propose actionable solutions through regular discussions and feedback loops.
- Documented and maintained detailed meeting minutes to ensure alignment on objectives, action items, and key decisions across the team.

PROGRAMMING LANGUAGES & TOOLS

Languages: Python, C, Java, Go, SQL, Javascript, HTML, CSS

Tools: Git, Docker, Make, CI/CD

FRAMEWORKS

Django, FastAPI, React.js, Next.js, Pytest, Jest

AREAS OF INTEREST

Full-Stack Web Development, Software Engineering