Andy Mitchell

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EDUCATION

Illinois Institute of Technology

August 2024 – May 2025

Master of Applied Science in Computer Science - GPA: 3.88/4.0

Chicago, IL, USA

Universidad Politécnica de Madrid

 $September\ 2020-December\ 2022$

Master of Science in Software Engineering — Grade: 9.4/10

Madrid, Spain

University of Portsmouth

September 2016 - July 2018

Bachelor of Science in Engineering and Management Studies — First Class Honours

Portsmouth, UK

PROJECTS

Interactive AI Resume Chatbot | React.js, TypeScript, n8n, Langchain, OpenAI API, Airtable

2024 - 2025

- A full-stack AI chatbot providing an interactive way to inquire about my background, skills, and projects.
- Engineered an n8n workflow backend leveraging Langchain nodes to integrate OpenAI's GPT-40 mini for natural language understanding, designed system prompts to ensure a friendly and accurate persona.
- Constructed custom AI tools to dynamically query and retrieve specific data from multiple Airtable bases, ensuring contextually relevant and accurate information delivery while maintaining a small context window.
- Built a responsive user interface with React.js and TypeScript, featuring dynamically cycling preset questions, markdown rendering for chatbot responses, and real-time API communication with the n8n backend.

EXPERIENCE

Senior Software Engineer

January 2022 – August 2024

Actemium Automation (Formerly Cougar Automation)

Remote / Portsmouth, UK

- Developed and implemented a C# Windows service to automate timesheet reminders and data entry; the application presented scheduled pop-ups to users, web-scraped project codes from the internal intranet, and programmatically submitted timesheet data to the corresponding webform based on user selection.
- Acting as lead engineer, successfully delivered over a dozen projects on time and under budget for the company's third-largest client. These projects represented 11% of regional sales, generating over £550,000 in revenue for the Portsmouth region in 2023.
- Responsible for maintaining and updating a modular .NET application using a hybrid codebase of C# and VB.NET, comprising 11 projects and over 75,000 lines of code.

Software Engineer Intern

January 2022 – January 2023

Amigos del Cayapas Association/TEDECO

 $Remote \ / \ Esmeraldas, \ Ecuador$

- Developed a full-stack telemedicine web application with REST API using Elixir, Phoenix and PostgreSQL to support doctors working in indigenous and Afro-Ecuadorian communities in rural Ecuador.
- Completed development of a corresponding Android app in Kotlin to be used by doctors in rural communities to submit patient information to web application to solicit advice from volunteer specialists in Europe.
- On-site work involved commuting to several remote villages via canoe to perform outreach and usability testing, resulting in more than 20 local doctors registering for the application.

Software Engineer Intern

September 2021 – December 2021

Hovering Solutions

Madrid, Spain

• In a fast-paced startup setting, designed and developed a full-stack web application using React, Node and MySQL to support parameter configuration for custom-built drones used for 3D scanning. Web app was hosted directly on drone, facilitating real-time parameter adjustments through a custom binary protocol to the ROS software.

Software Engineer

August 2012 – February 2021

Cougar Automation

Portsmouth, UK

- Designed, developed, and commissioned software solutions for more than 50 industrial automation projects.
- Engineered an innovative "auto conversion tool" using C# and Windows Forms, which automated the conversion of legacy industrial control software to a modern platform.

TECHNICAL SKILLS

Languages: Python, Java, C#, Kotlin, VB, Ruby, Elixir, SQL (MySQL, Postgres), JavaScript, HTML/CSS

Frameworks: React, Node, Express, Spring, JUnit, Rails, Bootstrap, Phoenix, Ecto

Developer Tools: Git, n8n, SVN, AWS EC2, Tomcat, Azure, Docker, VS Code, Visual Studio, PyCharm, IntelliJ