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Summary

I am a dual-honours student majoring in Computer Science and Biology. My background includes hands-on experience in software development, cloud computing, machine learning, and data science. I've had the privilege of working in various organizations such as Microsoft, UHG (Optum), and Fouses, where I contributed to the enhancement of their software applications and cloud computing solutions.

Experience

Technology development (Software developer and tester)

Optum

Jun 2023 - Aug 2023 (3 months)

- Proficient in Shell and Bash scripting for automation and system management.
- Experienced with AZ CLI for Azure resource management and Terraform(IAC)
- Skilled in Azure Load Testing service for performance testing, achieving an 86% reduction in testing time.
- Familiar with Jenkins for CI/CD automation(performance testing with Jenkins pipelines).
- Proficient in Apache JMeter for performance testing.
- Built chatbots(LLM) using Azure services, Microsoft Bot Framework and Bot Composer.

Chatbot Developer Microsoft

Feb 2023 - May 2023 (4 months)

- Assisted by Microsoft experts, I contributed to planning, designing, developing, and deploying a custom chatbot using Node.js, Python, Azure QNA maker API, and Azure services.
- The chatbot achieved an average accuracy rate of 70% in answering tech-related questions with a dataset of over 10,000 Stack Overflow questions.
- As part of the API and Testing teams, I developed and maintained API endpoints, automated test cases using Python and Selenium, and collaborated to resolve 95% of identified issues.
- Collaborated with a cross-functional team of 12 members, ensuring an average response time of less than 4 seconds per query for a seamless user experience.



CS Lab demonstrator Maynooth

University

Sep 2022 - May 2023 (9 months)

- Taught Java, databases, data structures and algorithms



Technology development (Software developer and tester)

Optum

Jun 2022 - Aug 2022 (3 months)

- Developing export functions in PDF, EXCEL and JSON format for large data-grids using C#
- Refactoring and redesigning of UI/UX components on the home page.
- Automation Regression Testing using SpecFlow and Selenium integration.
- Working with an Agile framework within the Enterprise Information Security Team.



Researcher

Maynooth University Human Health Institute

Jul 2021 - Aug 2021 (2 months)

- This Research falls under the biology, Mathematics/Statistics and computer science departments. The project involved studying the plasmids in E.coli and their association/dissociation with other resistant plasmids.
- The results obtained after various trials were then traced back to game theory models, processed through Microsoft Excel and ran on advanced software like Gephi and R.



Web Developer

Fouses

Sep 2020 - Oct 2020 (2 months)

- Assimilating the business requirement
- Communicate and involve with the design team
- Writing cross-browser compatible code
- Maintaining and improving website
- Collaborating and leading a team of 5 in developing a healthcare website (design, development and deployment).

Education



Maynooth University (2020-2024) - 1:1 (First Class Honours)

Bachelor of Science Dual Honours: Computer Science & Biology

Licenses & Certifications



Shields Up: Cybersecurity Job Simulation



Azure Resource Management and CLI - Skillsoft



Introductory Coaching Children Course - Sport Ireland



Swings and AWT for Java GUI Programming - learnmall.in



Certificate of Appreciation (web dev) - Fouses



Certificate of Appreciation in a mini hackathon (web dev) - Fouses 

cGMP: Introduction to Good Manufacturing Practice - Biopharma Institute

Skills

Test Automation • Java • Microsoft Azure • Microsoft Cognitive Services • Node.js • Agile
Project Management • Python (Programming Language) • Quantitative Research • Machine Learning •
Cloud Computing

Projects:

1. Health Care Website:
 - Description: Designed and developed a comprehensive healthcare website that provides information about medical services, appointments, and healthcare professionals. Built both the front end and back end for a seamless user experience. Leveraged Microsoft Azure cloud services for data storage and hosted the entire website on the cloud for scalability and reliability.
 - Technologies Used: Front-end (HTML, CSS, JavaScript), Back-end (Node.js, SQL), Azure Cloud
 - Key Features: Created a user registration system, and appointment booking functionality, and integrated a database hosted on Microsoft Azure for secure and scalable data storage. Ensured data privacy and security compliance while offering seamless access to healthcare information from the cloud. Implemented cloud-based hosting for optimal performance and availability.

2. Crypto SHA256:

- Description: Implemented a novel approach to analyze the similarity of hashed sentences using SHA256 encryption. Processed a dataset containing millions of grammatically correct sentences and discovered that some pairs had up to 21 common hashed letters.
- Technologies Used: Java
- Key Features: Developed a custom algorithm to calculate and compare SHA256 hash values efficiently. Analyzed and visualized the results to identify patterns and anomalies in the dataset.

3. House Price Prediction:

- Description: Utilized data exploration techniques with Python and the Pandas library to predict house prices. Employed various machine learning algorithms to build a predictive model based on historical housing data.
- Technologies Used: Python, Pandas, Machine Learning
- Key Features: Preprocessed and cleaned the dataset, performed feature engineering, and evaluated multiple machine learning models for accuracy. Implemented data visualization to gain insights into the housing market trends.

4. Simon Memory Game:

- Description: Developed a classic Simon Memory Game using JavaScript for interactivity, HTML for the structure, and CSS for styling. The game presents a sequence of coloured buttons to the player, challenging them to remember and replicate the sequence.
- Technologies Used: JavaScript
- Key Features: Implemented game logic, generated random sequences, and tracked player scores. Added a user-friendly interface with a responsive design.

Honours & Awards



MUSE AWARD - Maynooth University - May 2022

The Maynooth University Student Experience (MUSE) Awards recognised and rewarded my student contribution to non-credit-bearing activities. This award is for the successful completion of the MU Summer Programme for Undergraduate Research (SPUR) involving a six-week research placement.



BOOLE PRIZE - Maynooth University Mathematics Department - Jun 2021

This prize is awarded to the student obtaining the best result in Mathematics in the First Science Examinations. Instituted in honour of the mathematician George Boole (1815-1864), who laid the foundations for Computer Science.