Issac Abraham

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EDUCATION

09/2020 – 06/2025 **University of Portsmouth -** MEng Computer Science

- 1st Year – 3rd Year (BSc) Results = **First-Class**
- Current GPA **= 3.81/4.25**

EXPERIENCE

06/2022 – 07/2023 **Software Engineer Intern, Oracle** – Reading, UK

- Worked in a global SCRUM team following **SAFe/AGILE** principles.
- Worked with **Java/Spring** to develop REST APIs
- Used **OJET** to create demos for prospective customers and maintain admin pages.
- Increased **unit test** coverage on a project by over 40%.
- Used tools such as **Cucumber** for **integration testing.**
- Used **Kubernetes, Jenkins, OCI, Maven** and **Docker** to build, test and deploy to production in **OCI**.
- Implemented code to ensure AI suggestions met an AUC threshold before being suggested.
- Implemented code to fix cold-start issues for new customers.
- Used **GIT** and **ALM** to develop collaboratively.
- Worked with external teams to use their tools in my teams' projects and then communicated this research with my team.
- Volunteered in projects like warehouse clean-up for charity.

PROJECTS

AI Image Extending Web App

Used: Python Flask, React, Google OAuth, Azure, DALL-E, React, OpenCV, MongoDB

- Used **Azure** to notify users and store images.
- Used **DALL-E API** to extend images
- Research was done on creating models from scratch using **GANs**
- Used **OpenCV** to manipulate images
- Used **Google OAuth** to authenticate users.
- Used **Flask** to create backend API.
- Used **React** to create a responsive web app.

Dijkstra's Shortest Path with Google Maps

Used: Java/JavaFX, OpenCV, Google API

- Interfaced with **Google Maps API**.
- Used **OpenCV** to read the image.
- Used **Dijkstra's Algorithm** to calculate the shortest path.

Algo Trader with Pattern Recognition

Used: Python, parallel programming, Google Cloud (GCP), Machine Learning

- Interfaced with Oanda's REST and **Streaming API** to get stock prices and access accounts.
- Calculated mathematical indicators using **pandas** and **NumPy**.
- Used **Matplotlib** to visualize regressions/patterns.
- Sped up pattern recognition using **multiprocessing** and **multithreading.**
- Deployed to **Google Cloud Platform.**

Matrices Calculator

Used: Python, Tkinter, Mathematics

- Used **Python** to calculate matrix arithmetic, determinants and point of intersection.

Sudoku Multiplayer Game
Used: Python, WebSocket, MongoDB, Java/JavaFX, HTML, CSS, JavaScript

- Made a **WebSocket server** in **Python**.
- Used **Asynchronous** Programming.
- Used **backtracking** to calculate sudoku boards.
- Used **MongoDB** to store running games.
- Used **Java/JavaFX** to make a desktop GUI client.
- Used **HTML, CSS, and JavaScript** to make a web client.

Vehicle C02 Estimator - Group Coursework (University)
Used: Android/Java, Python, PostgreSQL, GitHub Actions, Heroku

- I oversaw maintaining **SCRUM** principles.
- Used communication skills to relay feedback to my team.
- I also oversaw integrating **CI/CD** with **GitHub actions** and **Heroku**.

Netflix & Spotify Front-End Clones
Used: React, Firebase

- Used **React** to retrieve content and dynamically update state.
- Used **React Context API** to manage state.

Playlist Duration Extension
Used: JavaScript, CSS, Chrome

- Used **JavaScript** to access and update YouTube's DOM
- 75 peak user downloads

To-do List
Used: Android/Kotlin, Flask, Python, MySQL

- Used **Flask/Python** to create a **CRUD** backend.
- Used **MySQL** to store user logins and tasks.

Connect 4 with AI Opponent
Used: C++, (Python) Algorithms

- Used **C++** to create a terminal-based Connect 4 game.
- Used **Minimax algorithm** for AI.
- Used **Alpha-Beta Pruning** to speed DFS.
- Recreated project with GUI using **Python/Pygame**

Networks Group Coursework (University)

- Used teamwork skills to collaborate with the group and achieve a high grade.
- Used leadership skills to manage group tasks and ensured tasks were done correctly and on time.

SKILLS

- **Python**
- **Data Science**
- **Java**
- **Kotlin**
- **HTML/CSS**
- **JavaScript(ReactJS, NodeJS)**
- **Flask**
- **Django**
- **REST API's**
- **Android**
- **SQL (MySQL, PostgreSQL)**
- **MongoDB**
- **Maven**
- **Google Cloud Platform**
- **Firebase**
- **Kubernetes**
- **Jenkins**
- **C++**
- **Linux**
- **Git/GitHub**

CERTIFICATIONS

12/2022	**Machine Learning –** DeepLearning.AI / Stanford University / Coursera
01/2022	**Azure AI Fundamentals -** Microsoft
06/2021	**MQ Developer Essentials -** IBM