RAJ MOHAMMAD

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EDUCATION

King's College London | Undergraduate   September 2022 – June 2025 (Predicted)
- Bachelors of Science (Hons) in Computer Science – Predicted First Class Honours

Imperial College London | Software Engineering   September 2022 – January 2023
- Distinction

King's College London Mathematics School | A-Levels   September 2020 – August
- A*, A*, A*, A, A - Mathematics, Further Mathematics, Physics, Computer Science, EPQ

EXPERIENCE

Student Software Engineer – Jaguar Land Rover   September 2023 - Present
- Developing and maintaining internal frontend and backend software, written in React, NodeJS, Python, Java and more to significantly reduce manual engineering tasks, perform data analytics, and improve task management in JIRA.
- Integrating CI/CD pipelines to streamline build, testing, and deployment.
- Creating and interacting with a RESTful API for remote communication and successfully transfer data between different systems.
- Constructed network communications between Arduinos using C++ to simulate module communication within vehicles and used to identify issues with module communication within a vehicle's network bus.
- Creating solutions to extract data from different file types including csv, xlsx, pdf, docs, etc.
- Worked with Google Cloud Platform, building, interacting, and processing with SQL and NoSQL databases with large vehicle datasets.

Software Engineer Intern – Coveo   June 2023 – September 2023
- Built custom POCs for clients using React and TypeScript to demonstrate generative AI features, mimicking pixel-perfect representations of their respective website designs from scratch.
- Utilised Machine Learning algorithms in product demos to drive relevance searching capabilities, query suggestions, facet management, pagination, and recommendations; each uniquely tailored to client requirements.
- Redesigned and refactored a demo environment increasing build efficiency and runtime performances, while also cutting down development to production transition time.

PROJECTS

X-Clone – React.JS, TypeScript, Prisma, PostgreSQL, GraphQL
- Developed a pixel-perfect, responsive clone of the social media platform X (Twitter), replicating core features and user interface elements.
- Integrated JWT-based authentication, enabling secure user logins, message posting, following other users, and personalised home feed browsing.
- Implemented a full-stack GraphQL API with Apollo Client for efficient and scalable data fetching from PostreSQL database.

FPS Multiplayer Game Prototype – C#, Unity, Amazon Web Services (AWS EC2)
- Constructed and documented the development of a prototype first-person shooter using Unity and C#
- Established multiplayer functionality by building a server to manage socket connections, TCP and UDP network protocol communication, lag compensation and more in a client-server architecture, built for a Linux computer hosted in AWS.
- Implemented popular first-person mechanics including wall-running, mantling and parkour stunting

Local Song Downloader – Python (+ pytube)
- Built an application that connects to a Spotify account, extracts playlist data, search for songs on YouTube and downloads songs locally.
- Utilises Spotify API with OAuth2 authentication and YouTube's API

Inventory Management System – HTML, CSS, Flask, SQLite
- Created a rough design of an inventory management system with communication between HTML templates and data stored in an SQLite database.
- Implemented routing and created an API within Flask for effective navigation and handling requests by executing SQL queries.

National University of Singapore High-School: Hackathon 2020 (U-Receipts) – HTML, Bootstrap/CSS, C#, SQL
- Led and developed a receipts-storing web application using .NET framework and Microsoft SQL Server.
- Worked and implemented frontend designs as well as creating an API to handle requests and responses.

SKILLS

Technical Skills: React, Python, TypeScript, PostgreSQL, MongoDB, GraphQL, AWS, GCP, CI/CD, Git, MatLab
Relevant Skills: Learner, Communicator, Problem-Solver, Analytical, Versatile, Creative, Innovative

References Available upon Request