

Additional Information

Education

How did you fare in high school mathematics, physical sciences, and computing? Which were your strengths and which most enjoyable? How did you rank, competitively, in these subjects?

In high school, I performed exceptionally well in mathematics and physical sciences, achieving grade points of A2(9) and A2(9) respectively and an A1(10) in computing in high school. I enjoyed all these subjects, but I found computing the most enjoyable because I liked solving problems and creating new things. These subjects were my strengths, and I thoroughly enjoyed the logical and analytical challenges they presented. I consistently ranked among the top students in my class for computing.

At high school, what leadership roles did you take on?

During high school, I actively pursued leadership roles, particularly within group projects. I took on the responsibility of coordinating and organizing group efforts to ensure the successful completion of our assignments. As a leader in these projects, I focused on fostering a collaborative and productive environment where team members could contribute their unique skills and perspectives.

What sort of high school student were you? Outside of required work, what were your interests and hobbies? What would your high school peers remember you for if we asked them?

I was an active and engaged high school student, not only excelling academically but also being involved in various extracurricular activities. Outside of academics, I had a keen interest in dancing and music, often participating in competitions. Additionally, I was known among my peers for being helpful and supportive, particularly when it came to assisting them with their assignments. Despite being initially shy, I would always step up to lend a hand and explain concepts or provide guidance on various subjects.

Which degree and university did you choose, and why?

For my master's degree, I chose the University of Glasgow, where I pursued an MSc in Information Technology. The decision to attend this prestigious university was influenced by several factors such as its reputable faculty, advanced curriculum, and the opportunity to engage with innovative research and technologies in the field of IT and the opportunity to engage with a global community of students and faculty members was something I valued. For my bachelor's degree, I chose Middlesex University Dubai, where I pursued a BSc Hons in Information Technology. Middlesex University Dubai is recognized for its quality education and emphasis on practical applications in the IT field.

What did you achieve at university that you consider exceptional?

During my university years, I achieved First Class Honors, which is a testament to my dedication, hard work, and strong academic performance. This accomplishment displays my commitment to maintaining a high standard of excellence in my studies. Additionally, I was honored to be offered the role of Student Learning Assistant, a position granted based on my academic merit and exceptional performance. Serving as a Student Learning Assistant allowed me to contribute to the academic community by assisting fellow junior-year students and sharing my knowledge and understanding of the subjects. This experience further enriched my understanding of the subject matter and improved my communication and leadership skills.

Web engineering experience

In your experience, which libraries and frameworks do you think will succeed in Web development tool sets?

From my experience, I believe that libraries and frameworks such as React and Vue.js will continue to thrive in the web development toolset due to their efficiency, flexibility, and strong community support. As I think libraries and frameworks that are easy to use, efficient, and scalable will succeed in web development toolsets along with those that are supported by a large community of developers will be more successful.

Describe your experience of web programming - JavaScript, Typescript, React, CSS and Python in particular.

In my journey through web programming, I have gained substantial experience in crucial languages and frameworks like JavaScript, CSS, and Python. Currently, I am in the process of learning React, with TypeScript on my learning roadmap.

- JavaScript: JavaScript has been a keystone of my web development projects. It enabled me to create interactive and dynamic user experiences. For instance, in my "Ecommerce Website" project, I harnessed the power of JavaScript to enhance user interactions and provide real-time updates on shopping carts, enabling customers to seamlessly add and manage items. Additionally, JavaScript facilitated the implementation of features like product recommendations based on the customer's search history, optimizing the overall shopping experience.
- TypeScript: While I am yet to gain hands-on experience with TypeScript, I am actively learning and preparing to incorporate it into my projects. TypeScript's static typing and enhanced code quality are appealing, and I foresee leveraging its benefits for improved codebase maintainability and reliability.
- React: Currently in the learning phase with React, I'm excited about its component-based architecture and the possibilities it offers for efficient UI (User Interface) development. Through ongoing tutorials and practice, I am gaining proficiency in creating components, managing state, and understanding the component lifecycle. React will play a significant role in my future projects.
- CSS: CSS has been an essential tool in my projects, allowing me to style and design web interfaces. I have utilized CSS extensively to ensure responsive designs and engaging user experiences across various devices. CSS frameworks like Bootstrap have also aided in streamlining the styling process. For the "Recipe Sharing Site," CSS played a vital role in achieving an aesthetically pleasing and user-friendly layout. I thoroughly enjoy leveraging CSS to design and explore the incredible possibilities it offers, making it my favorite aspect of building web applications.
- Python: Python has been instrumental, especially in the back end of my projects. With Python and Django, I have created robust applications, managed databases, and implemented server-side functionalities. Its versatility and clean syntax have made it a key tool in my web development toolkit. In my "Fashion Travel Planner," I used Python and Django to oversee backend logic and database management effectively.

As I continue my journey in web programming and advance my understanding of React and TypeScript, I am eager to implement these technologies in my projects. The goal is to leverage their capabilities to create more efficient, scalable, and visually appealing web applications, further enhancing my proficiency and versatility in web development.

Can you provide examples of when you would use utility-based frameworks (such as Tailwind CSS) and component based (such as Bootstrap).

I would use utility-based frameworks such as Tailwind CSS when I need to have complete control over the look and feel of my web application. I would use component-based frameworks such as Bootstrap when I need to develop a web application quickly and easily.

Software engineering experience

What kinds of software projects have you worked on before? Which operating systems, development environments, languages, databases, and frameworks?

I have worked on a variety of software projects, including e-commerce websites, social platforms, and games. I have used the following operating systems, development environments, languages, databases, and frameworks in my work:

- Operating systems: Windows, macOS,
- Development environments: Visual Studio Code, IntelliJ IDEA, Eclipse
- Languages: Java, Python, JavaScript, PHP, HTML, CSS
- Databases: MySQL, PostgreSQL, MongoDB
- Frameworks: Django, React, Vue.js, Node.js, React

Outline your thoughts on open-source software development. Have you been an open-source maintainer, and can you point to those projects?

I deeply value open-source software development as it promotes collaboration, innovation, and a sense of community. While I have not been an open-source maintainer yet, I am enthusiastic about contributing to open-source projects in the future. The idea of giving back to the community and collectively building powerful and accessible solutions is inspiring to me.

What is your proudest success as an engineer, or leader?

One of my proudest successes as an engineer was leading a team of three individuals, including myself, as the team leader, to develop an exceptional Ecommerce Website. This project demanded a high level of collaboration, technical expertise, and effective project management. Our team's diligent efforts and collaboration were reflected in our project's remarkable achievement, scoring an impressive 98/100. This not only highlighted our technical proficiency but also displayed my leadership skills in guiding the team, ensuring effective coordination, and overseeing the successful and timely delivery of a high-quality web application. The project's success has instilled in me a sense of pride, reinforcing my belief in the power of leadership, collaboration, dedication, and technical excellence in achieving outstanding results.

Outline your views on the role of an engineering manager in shaping a highly functioning team.

According to me, an engineering manager plays a vital role in shaping the team. They are responsible for setting goals and vision of the project. They also provide mentorship and support team members.

Describe your experience with micro-service architectures - web front ends, REST APIs, data stores, event processing and other kinds of integration between components. What are the key considerations for architecture, maintainability, and reliability in these large systems?

I have garnered valuable experience with micro-service architectures, engaging in various aspects such as web front ends, REST APIs, data stores, and event processing, and comprehending their intricate integration for robust system development.

- Web Front Ends: I have crafted engaging and responsive web front ends using frameworks like React, ensuring a seamless user experience across multiple devices and screen sizes.
- REST APIs: My experience involves designing and implementing RESTful APIs, focusing on clean endpoint design, appropriate usage of HTTP methods, and secure authentication and authorization mechanisms.
- Data Stores: I have effectively employed databases like MongoDB and SQLite3 for efficient data management. Understanding data models, optimizing queries, and ensuring data consistency were key aspects.
- Event Processing: I've integrated event processing mechanisms, enabling real-time updates and efficient communication between components, thereby enhancing system responsiveness and user experiences.

In building large-scale systems, architecture, maintainability, and reliability are paramount considerations. The architecture should be designed for scalability, ensuring that the system can handle increased load by scaling components independently. Resilience, through fault tolerance and graceful degradation, ensures system stability even in the face of failures. Effective monitoring, logging, and security measures are vital for system maintainability and security.

Outline your thoughts on quality in software development. What practices are most effective in software teams to drive improvements in quality?

Quality in software development is important because it ensures that the software is reliable, secure, and easy to use. Effective practices include rigorous code reviews, automated testing, continuous integration, and adherence to coding standards. Encouraging a culture of collaboration, providing regular training, and promoting a mindset of delivering high-quality, error-free code are also instrumental in driving improvements in software quality.

In my view, code reviews provide not just error detection but a valuable opportunity for learning and collaboration. Sharing a common understanding of coding standards within the team helps maintain clarity; ensuring our codebase is coherent and maintainable. Automated testing helps catch bugs early and gives me the confidence to push new features.