Web Developer Written Interview – Canonical

Web Engineering Experience

1. What skill or knowledge have you acquired in the past year that has been particularly helpful? What motivated you to learn it? What has the impact been for you and your team?

Over the past year, I focused on improving my Data Structures and Algorithms (DSA) skills. My primary motivation was to enhance my problem-solving abilities and perform well in technical interviews for top-tier job opportunities. This learning experience has significantly improved my coding skills, allowing me to write more optimized and efficient code. As a result, I am now more confident in tackling complex programming challenges, and I have noticed a substantial improvement in my coding speed and logical thinking.

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

Most of my web development projects have React.js and TypeScript as the frontend technologies. Since every webpage requires fundamental styling, I use HTML, CSS, and JavaScript extensively. For backend development, I primarily work with Python and PHP, and I have experience using frameworks like Laravel and Spring Boot for building robust and scalable applications.

3. Describe your experience building large systems with many services - web front ends, REST APIs, data stores, event processing, and other kinds of integration between components. What are the key things to think about in regard to architecture, maintainability, and reliability in these large systems?

I have worked on building systems that integrate multiple components like frontend applications, REST APIs, databases, and event-driven services. One of the most important things in such systems is to ensure scalability so that the application performs well even with increasing traffic. Maintainability is also key—using clean code, proper documentation, and modular design makes it easier to update or debug the system in the future. Reliability is crucial as well, which means implementing proper error handling, logging, and automated testing to ensure the system runs smoothly.

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 full-stack web applications, AI/ML-based research projects, and automation tools. My development environments include Windows, and I am comfortable using VS Code. My tech stack includes JavaScript (React, Node.js), Python (Flask, Django), Java (Spring Boot), PHP (Laravel), SQL (MySQL), NoSQL (MongoDB), and testing tools like Selenium and UIPath.

Outline your thoughts on open-source software development. Have you been an open-source maintainer, and can you describe the scope of your contributions to those projects?

I strongly support open-source software as it fosters collaboration and innovation. I have contributed to open-source web frameworks by improving documentation. Additionally, I have open-sourced my own task management system to allow my juniors to contribute, although they have not actively participated yet.

What is your proudest success as an engineer or leader?

One of my proudest achievements was designing and deploying an LLM-based RAG search system. This project involved integrating natural language processing (NLP), improving query relevance, and ensuring scalability. I successfully completed it before the due date, and it has been functioning effectively ever since.

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 comes from following good coding practices, writing clean and maintainable code, and implementing automated testing (unit, integration, and end-to-end tests). Regular code reviews help catch bugs early, while continuous integration (CI/CD) ensures smooth deployments. Clear documentation and periodic team discussions also improve overall software quality by keeping everyone aligned.

Education

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

I performed well in mathematics, physical sciences, and computing during high school. Mathematics was my strongest subject, and I particularly enjoyed problem-solving and logical reasoning challenges. I ranked among the top students in these subjects. I also secured highest marks from my school.

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

I was the leader of my school's Bapuji group, one of the four student houses. My role involved ensuring discipline among juniors and fellow students, fostering teamwork, and encouraging participation in various competitions. I motivated my group members to perform well in sports and other events, as the house with the most achievements was ultimately declared the winner.

Which degree and university did you choose, and why?

I pursued a BTech in Computer Science Engineering at the National Institute of Technology, Andhra Pradesh (NIT AP) because of my strong interest in software development and problem-solving. The

institute provided a solid technical foundation and access to industry-oriented learning opportunities.

What did you achieve at university that you consider exceptional?

One of my key achievements at university was successfully completing and deploying multiple full-stack projects, including AI/ML-based applications and web platforms. Additionally, I actively participated in hackathons and research work, which helped me expand my technical skills.

Context

Outline your thoughts on the mission of Canonical. What is it about the company's purpose and goals that is most appealing to you? What is risky or unappealing? Are there any elements of the company goals that you are unsure about?

I like that Canonical focuses on open-source software and cloud technology, which matches my interest in open-source development. Its focus on security and scalability also makes it a strong company in the industry. However, the fast-paced work environment and the need for deep technical knowledge might be challenging at times.

What would you most want to change about Canonical?

Canonical is doing great in open-source, but I think it could do more to connect with the developer community. Having more structured programs to help developers contribute and get mentorship would make it even better.

What gets you most excited about this role?

I'm excited about working with new web technologies, contributing to open-source projects, and learning from skilled teammates. I'm interested in helping improve web applications at Canonical.