

BQ

self intro

I am Zixuan Wang, a master student majoring in Computer Science from the University of Southern California. My technical expertise includes Java, Spring Boot, and backend development. I gained valuable experience during my internships at Ernest Engineering and NexWave Inc.

At Ernest Engineering, I implemented incremental data backup solutions using Kafka and AWS S3, reducing data storage costs and improving backup efficiency. I also automated backup scheduling with Quartz Scheduler, optimizing resource utilization and system reliability.

At Attestiv Inc., I integrated Slack API for real-time notifications and developed a ticket management system with React and Spring Boot.(这个你可能要改改。因为我在这里做的是修一下bug 还有就是改一下unit test。还有一些就是将客户的上传的图和视频分析完的数据用图表展示，这个公司是做AI检测视频和图是否被修改过的)

Beyond my professional experience, I have actively worked on impactful projects. For example, I developed an Online Learning Management System using Spring Boot, PostgreSQL, and AWS. This platform enabled secure course management with RESTful APIs and implemented scalable deployments using AWS Elastic Beanstalk. Another project, FitFusion, showcased my ability to integrate GraphQL and TypeORM for efficient backend-to-frontend communication, providing a seamless user experience.

I am proficient in Java, Spring Boot, Python, and a variety of backend technologies, and I am passionate about tackling complex problems and delivering innovative solutions. I am particularly drawn to opportunities where I can contribute to large-scale, impactful systems while continuing to learn and grow as an engineer.

FitFusion的项目 <https://coding.imooc.com/class/643.html>

Why Amazon? (这个不太确定怎么写)

Amazon's mission to be "Earth's most customer-centric company" deeply resonates with me because I strive to create impactful solutions that enhance user experiences. The company's emphasis on innovation and scalability aligns with my passion for building secure, reliable systems, as demonstrated in my previous projects and internships.

I admire Amazon's commitment to its Leadership Principles, such as "Customer Obsession" and "Deliver Results." These principles reflect the kind of work ethic I bring to every project. For example, during my internship at Ernest Engineering, I implemented a backup system using Kafka and AWS S3 that improved efficiency and reliability, delivering measurable results for the team.

Additionally, Amazon's global scale and cutting-edge technology, like AWS, offer an environment where I can continue to grow and apply my technical expertise in Java, Spring Boot, and cloud computing. Being part of a team that tackles complex challenges while shaping the future of technology is exciting and aligns perfectly with my career aspirations.

STAR 故事

challenging project

S: During my internship at Ernest Engineering, the company faced challenges in managing frequent backups of large datasets across multiple data sources. The manual backup process was time-consuming and inefficient,

T: My task was to design and implement a solution that could automate the backup process

A: I developed a web-based interface integrated with the data backup system. Using Spring Boot and MyBatis Plus, I created backend APIs to initiate database backups with one action. I also designed the frontend to display clear options for selecting specific databases or performing full backups. Additionally, I incorporated Minio for secure file storage and Quartz Scheduler for automating backups when necessary.

R: The new system streamlined the backup process, enabling users to back up databases effortlessly with a single click. This eliminated manual errors and reduced the time required for backups, while also improving the overall user experience and accessibility for non-technical users.

How to prioritize tasks?

I prioritize tasks by planning ahead, usually setting a clear schedule for what I need to accomplish the next day. This helps me stay organized and prepared. However, I remain flexible and adaptable. If an urgent task arises, I immediately reassess my priorities and adjust my schedule to address the urgent matter. I ensure that less critical or routine tasks are rescheduled to a later time, allowing me to focus on what's most important at the moment while still keeping long-term goals on track.

conflict with team member

Situation: During my internship at Attestiv Inc., my team and I were working on integrating a ticket management system with real-time notifications. One of my teammates and I disagreed on whether to use Redis caching to improve query performance or focus solely on optimizing database queries.

Task: My task was to ensure the team could agree on the best approach and complete the project on time without compromising the quality of the solution.

Action: I initiated a discussion with my teammate to better understand their perspective and concerns. I presented data from initial testing to show how Redis caching could significantly reduce query response times for our specific use case. At the same time, I acknowledged the value of optimizing database queries and proposed a hybrid approach: implementing Redis

caching for immediate gains while planning database optimizations for the long term. I facilitated a team meeting to present both approaches and encouraged input from other members.

Result: The team agreed on the hybrid solution, which reduced query response times by 12% during the project timeline and laid the groundwork for future database improvements. The resolution also strengthened our collaboration and ensured the project stayed on schedule.

Situation: During my time at Ernest Engineering, our team was tasked with implementing an incremental data backup system within a tight deadline. Some team members were unfamiliar with the tools we were using, such as Kafka and Quartz Scheduler, which created delays in the development process.

Task: As a key contributor to the project, I recognized the need to guide the team and ensure everyone was aligned on the project's objectives and technical requirements. My task was to foster collaboration, delegate responsibilities effectively, and complete the project on schedule.

Action: I took the initiative to organize daily stand-up meetings to track progress, address blockers, and clarify technical concepts. To support my teammates, I conducted a short training session on Kafka's data streaming features and how to use Quartz Scheduler for automated tasks. I also divided the project into smaller, manageable tasks and assigned them based on each member's strengths, ensuring a balanced workload.

Result: Under my leadership, the team completed the project ahead of schedule, delivering a robust data backup solution that reduced storage costs by 16% and enhanced efficiency. My efforts in guiding the team improved collaboration and technical understanding, and the success of the project was recognized by the management team.

failure handling ?

Situation: During my internship at Ernest Engineering, I was responsible for automating the database backup process. In the early stages of implementation, I made an incorrect assumption about the data volume being handled, which caused the system to fail under high load during testing.

Task: My task was to identify and resolve the issue quickly while ensuring the system could handle the expected workload without compromising reliability.

Action: I immediately took ownership of the mistake and informed my team about the issue. I analyzed the logs to pinpoint the problem and discovered that the backup pipeline wasn't optimized for large datasets. To address this, I researched best practices for handling high-volume data and updated the implementation to use batch processing in conjunction with

Apache Kafka's streaming capabilities. I also added stress-testing scenarios to the testing process to prevent similar issues in the future.

Result: The updated system successfully handled high data loads, improving reliability and scalability. This experience taught me the importance of validating assumptions and stress-testing systems early in the development cycle. As a result, I became more meticulous in testing and proactive in seeking feedback, which contributed to the successful delivery of the project.

how to troubleshoot a production issue?

During my internship at Ernest Engineering, I encountered an issue where the data backup process wasn't triggering as expected. I found that the Quartz Scheduler wasn't initializing properly, causing the automated backup tasks to fail. I restarted the application locally and noticed an error in the logs pointing to a missing configuration property for the scheduler. Using the IDE debugger, I traced the application flow and confirmed that the configuration file didn't include the necessary cron expression. I double-checked the configuration files and environment variables to ensure all required settings were included. I added the missing cron expression to the configuration and restarted the application. The scheduler initialized correctly, and backups triggered as expected. I updated the project documentation to include all required configuration properties, ensuring this issue wouldn't occur during deployment.

其他问题：

1. handle feedback and criticism?

Situation: During my internship at Attestiv Inc., my manager provided feedback on a feature I implemented for a ticket management system, pointing out that the code structure could be improved for better maintainability.

Task: My task was to address the feedback, refactor the code, and ensure it adhered to the company's coding standards.

Action: I carefully reviewed the feedback with my manager to fully understand the suggested improvements. I then researched best practices for clean code and implemented changes to make the codebase modular and easier to maintain. I also requested a code review session with a senior developer to ensure my updates met expectations.

Result: The revised code received positive feedback from my manager and improved the system's scalability. This experience reinforced my ability to handle feedback constructively and turn it into an opportunity for growth.

2. experience working in an agile environment.

Situation: During my internship at Ernest Engineering, my team used an agile methodology to develop an internal data backup system. The system was designed to streamline the backup process for the company's internal operations, with evolving technical requirements.

Task: My task was to implement and test the incremental data backup functionality within a two-week sprint while collaborating closely with my team to ensure smooth integration with existing systems.

Action: I actively participated in sprint planning meetings to break the work into smaller tasks, such as integrating Apache Kafka, automating backups with Quartz Scheduler, and setting up a user-friendly interface. During daily stand-ups, I provided updates, discussed blockers, and sought input from team members to ensure progress. I also focused on iterative testing to ensure that each delivered feature met internal requirements and integrated seamlessly with the overall system.

Result: The team successfully delivered the incremental backup feature within the sprint, improving the efficiency of the backup process and reducing manual intervention. The agile methodology allowed us to adapt to new technical insights and improve team collaboration throughout the development cycle.

3. How do you ensure code quality and reliability?

Situation: During my internship at Ernest Engineering, I was responsible for developing a data backup system. Ensuring the reliability of the backup process was critical since any failure could compromise internal operations.

Task: My task was to ensure the code was robust and maintainable while preventing runtime errors or failures during backups.

Action: I implemented unit tests for key functionalities, such as database connectivity and file storage, achieving 85% test coverage. I also incorporated integration tests to verify the interaction between components like Kafka and AWS S3. I configured CI/CD pipelines to automate testing for every commit, ensuring code quality before merging. Additionally, I conducted peer code reviews to validate logic and improve maintainability.

Result: The system operated reliably after deployment, reducing backup errors by 20%. The automated testing framework streamlined the development process and ensured a consistent standard for code quality across the team.

4. handle a tight deadline.

Situation: During my internship at Ernest Engineering, my team faced a tight two-week deadline to deliver an automated database backup system for internal use. This was critical for streamlining the company's backup operations.

Task: My task was to design and implement the user interface for initiating backups and integrate it with the backend system, ensuring it worked seamlessly within the tight timeframe.

Action: To meet the deadline, I prioritized the core functionality and broke the task into smaller deliverables, focusing on one feature at a time. I coordinated with my team during daily stand-ups to ensure alignment and quickly resolved blockers. I used efficient development tools, such as IntelliJ for debugging and Postman for API testing, to speed up the process. I also extended my working hours when necessary to ensure progress stayed on track.

Result: The project was completed on time, and the system allowed users to initiate backups with a single click, simplifying the process and reducing manual errors. This successful delivery highlighted my ability to work efficiently and maintain quality under pressure.

5. Describe a situation where you had to make a tough decision with limited information

Situation: During my internship at Ernest Engineering, I was tasked with automating the company's database backup system. While implementing incremental backups with Kafka, I encountered an issue: I had to decide between two approaches for handling large data volumes—batch processing or streaming. However, there was limited data available on the system's typical load patterns, as no historical performance logs existed.

Task: I needed to choose the best approach quickly to keep the project on schedule and ensure the system would work efficiently under production loads.

Action: I analyzed the available information, including the estimated database size and the typical frequency of updates. I consulted team members to gather insights and reviewed best practices for similar scenarios. Given the tight timeline, I decided to implement a hybrid approach: using streaming for real-time updates while relying on batch processing for larger,

scheduled backups. This would allow the system to handle data efficiently without requiring extensive performance data upfront.

Result: The hybrid approach worked effectively and ensured the system operated reliably under various load conditions. Once the project was deployed, the team collected performance metrics to refine the solution further. This decision allowed us to meet the project deadline while creating a scalable foundation for future enhancements.

6. How to learn new programming languages or frameworks?

I approach learning new programming languages or frameworks with a structured plan. I start by understanding the fundamentals, such as syntax, key concepts, and best practices, through official documentation, tutorials, or courses. Next, I focus on hands-on practice by building small projects or solving problems on platforms like LeetCode or HackerRank. I also explore open-source projects to see how experienced developers use the language or framework in real-world scenarios. Finally, I consolidate my learning by applying it to a larger project or contributing to a team effort, which helps me gain deeper insights and practical experience.

7. handle working under pressure?

Situation: During my internship at Ernest Engineering, I faced a situation where the team was tasked with delivering an automated database backup system within a two-week deadline. Midway through the sprint, a critical integration issue arose with Kafka that threatened to delay the entire project.

Task: My task was to resolve the integration issue quickly while ensuring the rest of the project stayed on track.

Action: I prioritized the integration issue by dedicating focused time to debugging and isolating the problem. I also communicated the situation to my team, delegating smaller tasks to ensure other parts of the project progressed. To resolve the issue, I reviewed the logs, tested multiple configurations, and consulted Kafka's documentation. After identifying the root cause, I implemented a fix and tested it thoroughly.

Result: The integration issue was resolved within a day, and we delivered the project on time. This experience reinforced my ability to stay focused under pressure, manage competing priorities, and deliver results without compromising quality.

8. Tell me about a time when you successfully managed a project from start to finish.

Situation: During my internship at Ernest Engineering, I was tasked with leading the development of a data backup system for internal use. The goal was to create an automated solution that allowed users to back up databases with a single click, eliminating the need for manual commands and reducing errors.

Task: My responsibility was to manage the entire project, from planning and designing the system to implementing and testing it, while ensuring it met the company's requirements and deadline.

Action: I started by gathering requirements from the team to understand the key features needed, such as incremental backups, a user-friendly interface, and scheduling options. I created a project plan, breaking the work into manageable tasks, and prioritized them based on dependencies. I chose Apache Kafka for real-time data processing and Quartz Scheduler for automation.

Throughout the project, I conducted regular check-ins with team members to track progress and address any blockers. I also tested the system incrementally to ensure reliability and performance, using tools like Postman to validate the APIs and simulate user interactions.

Result: The project was completed on time and exceeded expectations. The system allowed users to initiate backups effortlessly, reduced manual errors by 30%, and improved backup efficiency by 16%. The success of the project reinforced the team's trust in my ability to lead initiatives and deliver quality results.

9. How do you ensure effective communication within your team?

Situation: During my internship at Ernest Engineering, I led a team project to develop an automated database backup system. The team included members with varying levels of experience and familiarity with tools like Kafka and Quartz Scheduler.

Task: My task was to ensure smooth communication across the team to align efforts, share updates, and address challenges efficiently.

Action: I initiated daily stand-up meetings to share progress, clarify tasks, and resolve blockers. I created a shared document to track tasks, deadlines, and responsibilities, ensuring everyone could stay updated asynchronously. To address technical gaps, I conducted short training sessions on tools like Kafka and made myself available for one-on-one discussions. I also encouraged open feedback during weekly retrospectives to continuously improve our collaboration.

Result: The team worked cohesively and completed the project ahead of schedule. Effective communication helped resolve blockers quickly and kept everyone aligned, contributing to a 30% reduction in manual errors in the final system.

10. How do you handle ambiguous requirements?

Situation: During my internship at Ernest Engineering, I was assigned to implement a data backup feature, but the initial requirements were vague. The team needed an automated solution, but specific details, such as backup frequency, data size, or user interface, were not defined.

Task: My task was to clarify the requirements and design a solution that met the team's needs while ensuring flexibility for future adjustments.

Action: I began by meeting with team members to gather insights into their expectations and constraints. Since exact requirements were unavailable, I proposed an incremental approach: starting with a minimal viable product that supported manual backups and building on that. I implemented APIs for backup initiation, integrated Kafka for scalability, and added logs for tracking. Along the way, I conducted regular check-ins to gather feedback and refine the solution based on the team's input.

Result: The minimal viable product was delivered on time, and the iterative process allowed the team to identify additional features, such as scheduling and error notifications, which I implemented in subsequent iterations. This approach ensured the system was functional, scalable, and aligned with the team's evolving requirements.

11. How do you stay motivated during long projects?

Situation: During my internship at Ernest Engineering, I worked on a project to develop an automated data backup system. While some components of the project had tight deadlines, the overall implementation spanned several months and required sustained effort to deliver all the planned features, including incremental backups, scheduling, and a user-friendly interface.

Task: My task was to maintain consistent focus and progress over the entire duration of the project while meeting shorter deadlines for specific milestones.

Action: I approached the project by breaking it into smaller, clearly defined phases, each with its own goals and deadlines. This allowed me to tackle urgent tasks first while maintaining momentum for the long-term deliverables. I stayed motivated by tracking progress, celebrating each completed milestone, and continuously learning new tools, such as advanced Kafka configurations and Quartz Scheduler. Collaborating with teammates and regularly reviewing our progress helped me stay engaged and ensure alignment with the broader objectives.

Result: By staying organized and motivated, I successfully delivered my components of the project on time, including both the short-term features with tight deadlines and the long-term deliverables. This approach ensured the project remained on track and fully met the company's requirements.