SHIXUN LI

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SUMMARY

Software engineer with 3+ years of experience, specializing in full-stack development, particularly with JavaScript, TypeScript-based frontend frameworks, Java and Python. Proficient in cloud deployment on AWS and Azure using CI/CD tools. A proven team player with excellent communication, time management, and problem-solving skills.

CERTIFICATIONS

AWS Certified Solutions Architect – Associate | [**Credential**](#)   Sep 2024 – Sep 2027
AWS Certified Developer – Associate | [**Credential**](#)   Oct 2024 – Oct 2027

SKILLS

Programming Languages: Java, Python, C/C++, JavaScript/TypeScript, SQL, Shell, YAML, JSON
Frameworks: Spring Boot, Django, Node.js, React, Vue, Flutter, PostgreSQL, MySQL, Redis, MongoDB
Tools: Linux, Git, Docker, Kubernetes, Nginx, Terraform, AWS, Azure, CI/CD

EXPERIENCES

The University of Queensland   **Brisbane, Australia**
Research Fellow   Jul 2023 - Jun 2024

- Designed a decentralized data escrow system by strategically planning the project with 5 key milestones, delivering all phases on schedule, and completing the project 3 weeks early.
- Simulated **Ethereum** blockchain environments using **Ganache** to deploy and test smart contracts, ensuring seamless integration and reliability during the development of the decentralized escrow system.
- Developed 10+ **React**-based data request pages with user-friendly interfaces to interact with Ethereum smart contracts, integrating **JWT** authentication and block verification to ensure secure multi-role access.
- Engineered a **C** and **C++** backend for secure key exchange processing within an **SGX** enclave, establishing validated TLS tunnels with **OpenSSL** to non-SGX machines to ensure maximum threat protection, and compiling with **CMAKE**.
- Leveraged **shell scripts** and Wireshark to capture hardware performance and network traffic, extensively analysed potential attacks through collected data and concatenated with **150+ Dafny verifications**, reducing error by **14.1%**.

DouYu International Holdings Ltd   **Wuhan, China**
Software Engineer Intern   Aug 2021 - Jan 2022

- Collaborated with 3 cross-functional teams to design and implement a streaming mission system, independently optimizing performance through **lazy-loading**, leading to an over **$500,000** increase in monthly revenue.
- Implemented a streamer ranking feature using **Vue** and **Element UI**, providing a dynamic and interactive interface that displays monthly rankings and performance metrics to enhance streamers engagement.
- Designed and developed **RESTful APIs** with Java Spring Boot within a **microservice** architecture to retrieve **1,000,000+ CDKs** into a **MySQL** database, successfully troubleshooting and debugging unit and integration tests, reducing miss retrieval rate by 3.2%.
- Automated daily live stream data visualization using **Python** and **Elasticsearch**, summarizing actionable insights that empowered senior leadership in strategic decision-making, achieving up to a **3x** increase in Watch Time and DAU.

PROJECTS

Blogging Community Website | [**GitHub**](#) | [**Live Demo**](#)   Oct 2024 – Nov 2024

- Engineered a robust backend architecture with the **Spring Framework** (Spring Boot, Spring Security), implementing JWT and **OAuth2** for secure authentication and authorization, including third-party login features.
- Designed and developed an intuitive front-end interface with React, **Tailwind CSS**, and **Material UI**, enhancing user experience through responsive design and seamless navigation.
- Implemented RESTful APIs using **JPA** and **Hibernate** with **DTO projections**, optimizing data persistence and ensuring efficient database operations with a **PostgreSQL** database.
- Conducted comprehensive unit and integration testing using **JUnit**, **Postman**, and **Swagger**, streamlining troubleshooting processes and ensuring high-quality code and system functionality across all components.

Inventory Management System | [GitHub](#) | [Live Demo](#)   Sep 2024 - Oct 2024
- Consulted with retail managers to define **system design** requirements, ensuring the solution architecture and **database design** met business needs, resulting in a highly available, secure, and scalable solution tailored to the retail industry.
- Crafted a responsive UI/UX using Figma and implemented with React and Tailwind CSS, enhancing the user experience by deploying on **AWS S3** with **CloudFront** for global content caching and **Route 53** for reliable DNS management.
- Architected a **VPC** with private and public subnets, ensuring robust security measures, implemented a **Django**-based backend interacting with **ALB** and **NAT Gateway** within private subnets, and connected to a PostgreSQL **RDS** database inside database subnets, further enhancing the overall security.
- Containerized the entire project using **Docker** for both local and cloud deployment, streamlining manual AWS deployments through **Terraform** automation, ensuring scalability, usability, and portability across environments.

Real-time Messaging Application | [Demo video](#)   Apr 2024 - Jun 2024
- Participated in regular SCRUM meetings, including product backlog refinement, sprint planning for a minimal functional product, and sprint review sessions, collaborating closely with a 5-person team to ensure each sprint's successful delivery.
- Developed a user-friendly frontend using **Next.js** and **TypeScript**, featuring login, friend request, and chat interfaces for seamless real-time communication.
- Participate in the development of a messaging service using **Flask**, proficiently leveraging **SQLAlchemy** ORM with a PostgreSQL database to manage data operations, and implemented both **WebSocket** and RESTful APIs for real-time communication and user authentication.
- Integrated **Redis** to implement a message queue system, enabling API services in a distributed environment to subscribe and efficiently handle messages by forwarding them to users through available services in real-time.
- Leveraged **GitHub Actions CI/CD pipelines** to automate testing, build, and deployment processes, ensuring faster and more reliable software delivery.

Weather Search Website | [GitHub](#)   Apr 2023 - Jun 2023
- Decoupled data storage from the Pod by creating a **PVC** for MySQL data, ensuring an independent lifecycle for storage.
- Configured and optimized **Kubernetes** Pods by defining pod specifications, **ConfigMaps**, and **Secrets**, ensuring reliable and secure application deployment.
- Utilized Docker for seamless application packaging and leveraged Kubectl with CI/CD pipelines to ensure high availability and scalability of a backend microservice deployment on **GKE** clusters within GCP.

Mobile Noise Control Application | [GitHub](#)   Jun 2022 – Nov 2022
- Designed a kid-friendly cartoon UI/UX using Figma and developed the app with **Flutter** for iOS and Android devices.
- Utilized GitHub for version control, enabling efficient collaboration through branching, merging, and pull requests.

EDUCATION

The University of Queensland	**Brisbane, Australia**
Master of Computer Science	Feb 2023 - Jun 2024

The University of Queensland	**Brisbane, Australia**
Bachelor of Computer Science	Feb 2020 - Dec 2022