

Alena Lian Sim

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SUMMARY

Results-oriented and self-driven candidate with a strong foundation in data structures, and algorithms. Proficient in Java and Python, with hands-on experience in 3+ full-stack projects. A certified Lean Six Sigma Black Belt, adept at solving complex problems efficiently. A culturally diverse background with fluency in English, Korean, and Chinese enhances my ability to collaborate seamlessly with diverse teams. I thrive on collective achievement and eagerly anticipate merging my traditional engineering expertise from the medical device industry with technology to unlock limitless opportunities.

EDUCATION

Online M.S. in Computer Science @ Georgia Tech | Part-time Program, Expected Spring 2025

- Relevant Coursework: Software Development Process(CS6300), Database System Concepts and Design (CS6400), Data Structures and Algorithms (CS1332), Object-Oriented Programming (CS1331), Statistics (COE2001)

B.S. in Biomedical Engineering @ Georgia Tech | Highest Honor Graduate | Spring 2017

Coding Boot Camp Certificates @ LaiOffer

- Software Development Essentials (full-time) & Full Stack Development (full-time) | 2022 - 2023

PROJECT EXPERIENCE

ParcelGuard: Community Management System to Prevent Missing Parcels | 2023

- Designed and developed a comprehensive web application to address package loss issues in apartment complexes.
- Implemented token-based authentication with role-based access control for secure user interactions.
- Created a dynamic community forum with features like post/reply management, post liking, and pinning/unpinning.
- Developed a package management system allowing residents to track, receive notifications, and schedule pickups.
- Utilized React, Ant Design, MySQL, AWS RDS, and AWS S3 for a robust and scalable solution.

StayEase: A Platform for Accommodation Exploration, Booking, and Management | 2023

- Engineered backend leveraging Spring Boot, facilitating stay-related operations, including uploads, deletions, searches, and reservations, thereby optimizing user experience and streamlining administrative tasks.
- Collaborated with frontend partner to create user-friendly React-based frontend, fostering cross-functional teamwork.
- Utilized Hibernate and Google Cloud Storage for data and media file management.
- Integrated geospatial index in Elasticsearch for efficient stay searches.
- Implemented a Spring Data JPA schema for automated data generation.

A Personalized Twitch Resources Recommendation Engine | 2023

- Conceptualized a full-stack project driven by my passion for learning coding through Twitch streams. What started as a personal passion project turned into a friends and family project (20 users and growing!)
- Developed Spring Boot application from scratch, tailored to Twitch content discovery based on user preferences
- Designed a user-friendly web page utilizing the React and Ant Design framework
- Leveraged AWS RDS with MySQL to store Twitch API data, ensuring simplicity and scalability for future expansion
- Ensured low-latency user interactions by implementing Caffeine cache, enhancing project scalability & responsiveness
- Containerized for AWS App Runner deployment, expanding global accessibility and increasing user reach

WORK EXPERIENCE

Edwards Lifesciences *Senior Research & Development Engineer* | Irvine, CA | 2019 - 2022

- Designed a suture routing method to simplify the implant release procedure. Filed 4 Provisional Patents.
- Led a 5-member team through challenging COVID-19 circumstances, executing Design Verification (65 tests) to extend device shelf life, saving ~\$7M in expiring units.
- Functioned as project lead in a pivotal project, collaborating closely with biologists and chemists. Implemented strategic changes that resulted in 66% reduction in duration of Biocompatibility and Toxicological Assessments.

SKILLS

Programming Languages: Java, Python, JavaScript, and R

Tools/Frameworks: Spring Boot, RESTful APIs, Hibernate, React, MySQL, AWS, Google Cloud (GCP), Elasticsearch, JUnit Testing, Docker, Postman, Git, MiniTab.

Problem-solving (Filed 5 patents, Lean Six Sigma Black Belt Certified), **Project Management** (MS Project, Scrum)