

SHIKHA VERMA

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SUMMARY

Software Engineering graduate with 3 years of full-stack development experience, specializing in object-oriented programming, database management, and API creation. Proficient in Java, JavaScript, Kotlin, Python, C/C++, and various frameworks/tools. Experienced in optimizing database structures and enhancing communication efficiency through custom APIs.

WORK EXPERIENCE

Silicon Labs

May 2024 - Present

Application Engineering Intern

Austin, Texas

- Developed and deployed an automated **pipeline** using **Python**, **libfuzzer**, and **libprotobuf-mutator** for fuzz testing firmware upgrade software; increased testing efficiency by 45% and reduced manual intervention by 60%.
- Enhanced team efficiency through updated documentation, streamlining processes, and improving clarity for stakeholders.
- Strengthened our chip's security by conducting **comprehensive analysis tests** to compare it with competitors, resulting in fortified security measures and a competitive edge in the market.

GMO Research

October 2020 - July 2023

Software Development Engineer

Tokyo, Japan

- Engineered a significant improvement to the feasibility system by smoothly transitioning from the **MVC** framework to a robust **Client-Server architecture**, employing cutting-edge technologies like **SpringBoot** and **CakePHP 3**.
- Normalized the MySQL database structure, leading to a substantial **30%** boost in data retrieval efficiency for a vast database encompassing **1.2 million panelists** across **2000 panels**, optimizing data handling and processing capabilities.
- Integrated **5+ client APIs**, seamlessly into our system, fostering a robust ecosystem for streamlined data exchange and enhancing service capabilities. This strategic integration significantly contributed to a notable **20%** increase in revenue.
- Created bespoke **Kotlin APIs** to optimize communication, slashing response times by **25%** for point grant information delivery to clients, demonstrating a focused approach to enhancing system efficiency and user experience.

EDUCATION

Arizona State University, Tempe, Arizona, USA

August 2023 - May 2025

Masters of Science in Software Engineering

Indian Institute of Technology, Goa, India

August 2016 - May 2020

Bachelors of Technology in Computer Science and Engineering

TECHNICAL SKILLS

Programming Languages	Python, Java, JavaScript, MySQL, Bash, C++, Kotlin
Testing	JUnit 5, pytest, PHPUnit
Frameworks	SpringBoot, FastAPI, NodeJS, React, CakePHP
DevOps / Site Reliability	Docker, AWS, CI/CD, Git

PROJECTS

Taiga-Based Scrum Metric Calculator

January 2024 - May 2024

- Designed a web application based on an **orchestrating Microservices** architecture leveraging Taiga API to compute and visualize **8** standard and tailored scrum metrics using **React**, **fast API** and **SpringBoot**.
- Implemented multithreading to optimize application performance, reducing response time from **2 minutes to 15 seconds**.
- Streamlined code quality assurance by creating a **CI/CD pipeline** that runs **unit tests** and **static analysis** on Sonar with every push, resulting in faster feedback and improved code reliability.

Deep learning Vulnerability detection in Python source code

January 2024 - May 2024

- Achieved a top accuracy of **92%** in detecting vulnerabilities in Python code using Neural Networks, outperforming other models like Gradient Boosting (**91%**) and Random Forest (**91%**).
- Transformed raw source code into a machine-understandable format through **vectorization** and **tokenization**, enabling the application of machine learning models and improving vulnerability detection by up to **16%**.
- Evaluated 5 machine learning models, selecting Neural Networks for scalability and continuous learning capabilities.

Card Game Based Scrum Simulator

August 2023 - December 2024

- Created a card game based scrum simulator using **JAVA**, **Swing** and **Spring** by following scrum methodologies.
- Introduced blocker and progress cards and their randomized selection, enhancing stand-up simulations to mirror real-world scenarios effectively. Automated Scrum Master responses based on developer availability.
- Developed a feature to download Scrum data by sprints, fostering in-depth data analysis and retrospective insights.