Khang Lam

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PROFESSIONAL SUMMARY

Software Engineer II with over 5 years of expertise in backend development and automation. Proficient in Java and Spring Boot, designing scalable APIs for enterprise systems. Pioneered adoption of Model Context Protocol (MCP) servers at Mercury Insurance, creating AI-driven tools that analyze Jira tickets, implement solutions with unit/integration tests, and cut turnaround time by 40%. Recognized as the go-to engineer for mentoring teams on MCP adoption and AI integration. Skilled in microservices, CI/CD pipelines, and Agile practices, delivering reliable, innovative solutions for mission-critical insurance applications.

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript
Tools: MCP, Spring Boot, REST API, Postman, OpenAPI, Docker, Jenkins CI/CD, Kubernetes, Selenium, Git.

PROFESSIONAL EXPERIENCE

Software Engineer II | Mercury Insurance | Brea, CA   **Oct 2024 - Present**
- Pioneered the use of Model Context Protocol (MCP) servers – Built AI-driven tools to analyze Jira bugs, implement highly accurate solutions, and generate unit and integrated tests to meet all acceptance criteria, significantly cutting tasks turnaround time by 40%.
- Mentored cross-functional teams on MCP adoption, driving company-wide AI automation initiatives.
- Contributed to backend API development using Java and Spring Boot, integrating solutions into Mercury's flagship API ecosystem.
- Ensure code quality by maintaining unit test coverage above 70% to meet strict code quality standards.

Senior Software Automation Engineer | Mercury Insurance | Brea, CA   **July 2019 – Oct 2024**
- Led automation initiatives using Selenium and Java, reducing test execution time by 75% and improved defect detection by 60%.
- Integrated automated test frameworks into CI/CD pipelines, improving deployment reliability.
- Led API parallel testing initiative, customizing the testing framework to handle execution of hundreds of test cases simultaneously, easily achieving over 500% faster execution and 40% earlier defect detection.

PROJECTS

Web App – Job Application Tracker | JAVA + SPRING BOOT, JAVASCRIPT + REACT   **Live | Repo**
- **Description:** Developed a full-stack web application for tracking job applications status, and follow-ups to streamline the job search process.
- **Technical Details**:
  - Built robust RESTful backend API using Java Spring Boot framework with structured database design.
  - Implemented AI-powered salary estimation system to provide accurate compensation insights for job applications.
  - Containerized application using Docker for consistent deployment and easy scalability across different environments.

Web App – Youtube2Spotify | JAVASCRIPT, REACT, PYTHON   **Live | Repo**
- **Description**: Developed a full-stack application that seamlessly converts YouTube playlists to Spotify playlists.
- **Technical Details**:
  - Integrated YouTube Data API v3 and Spotify Web API with smart song matching algorithms for accurate playlist conversion.
  - Implemented secure OAuth 2.0 authentication for both platforms without storing user credentials.
  - Designed smart algorithm to search Spotify for the best matching song based on YouTube video titles, artists, and durations.

Reinforcement Learning – Snake Game AI | PYTHON, OPENAI GYM, PYGAME, STABLE BASELINES3   **Repo**
- **Description:** Engineered a Snake AI agent employing various Reinforcement Learning algorithms to achieve high score.
- **Technical Details**:
  - Integrated with the OpenAI Gym framework for a standardized environment.
  - Implemented RL algorithms for intelligent decision-making, utilizing Qlearning, OCR, PPO/DQN techniques.
  - Leveraged the power of Stable-Baselines3 interfaces for efficient training, and evaluate performance with TensorBoard.

EDUCATION

California State Polytechnic University | Pomona, CA
B.S. in Computer Science   **May 2018**

ACHIEVEMENTS

- **Awarded for Outstanding Support**: Recognized by Mercury Insurance for simplifying complex technical workflows and empowering non-technical teams through training and support initiatives.
- **First Place – Code Day LA Hackathon (2015)** – Built multiplayer server for a cloned version of *Plants vs. Zombies*.

CERTIFICATIONS

Oracle Certified Associate, Java SE 8 Programmer	October 2023
Certified CloudBees, Jenkins Engineer	December 2022
Certified SCRUM Developer	February 2022
ISTQB Foundation Level Certification	December 2021