

AKASH KUMAR

+1 (352)-740-6786 | akash.kumaruf1@gmail.com | [linkedin.com/in/akash-kumar916](https://www.linkedin.com/in/akash-kumar916) | akashkumar.tech

Education

- **University of Florida** | Gainesville, Florida Aug 2022 – May 2024
Masters of Science in Computer Science
Courses - Advanced DSA, DBMS, Distributed Systems, Analysis of Algorithms
- **Lovely Professional University** | Punjab, IND Aug 2017 – May 2021
Bachelor of Technology in Computer Science
Courses – Data Structures, Algorithms, Object Oriented Programming, Operating Systems

Work Experience

- **University of Florida | Graduate Research Assistant** Sept 2022 – Present
Conducting individual research to determine the best **debugging strategies**. Utilizing machine learning, the goal is to find the most effective and generic strategies for debugging codes regardless of the programming language.
- **Tekion Corp. | Software Engineer** Nov 2021– Jul 2022
Tekion Pay – Worked on a payment system based on spring MVC, which handles over **10k transactions** per month, and includes services for terminal cashier, account management, and stripe Integration.
Created an **asynchronous service** with thread pool executor to streamline the onboarding process and reduced **80%** of the manual workload of multiple APIs into atomic steps using schedulers.
Calc Engine – Designed and implemented a content management system for calculating tax and fees for US states with low-latency APIs to drive **60% faster** transactions and reduce third-party API calls.
- **Acko Technology | Software Engineer** Jun2021– Nov 2021
Contributed to policy management portal development and implemented product coverage features, including creating, updating, deleting, downloading, and deploying policy cards using **Docker containers**.
Integrated service with **Kafka** messaging system for efficient communication and data flow.
Optimized the excel upload feature by implementing Redis to speed up database transactions and cut processing time from **1.3 sec** to **0.5 sec**.
- **Amazon | Software Developer Intern** Jan 2021– Mar 2021
Asset Service – Implemented a microservice that allowed users to efficiently schedule and monitor asset maintenance, reducing the time for workflow deployment by **2x times** by reducing API calls.

Technical Skills

- **Languages:** C, C++, Java, Python, Javascript, React JS, Erlang, PL/SQL, HTML, CSS, Shell script
- **Databases:** Oracle, MySQL, PostgreSQL, Redis, MongoDB
- **Tools and Frameworks:** Spring Boot, Kafka, Docker, AWS, JUnit, Rest, Unix, Maven, Git, Jira, Elasticsearch

Project Experience and POCs

- **Twitter Engine Simulation** Nov 2022
Created a highly efficient Twitter-like engine using an actor model and **WebSocket** interface in functional programming. Developed a multiple JSON-based API to retrieve the Tweets, Subscribers, queries, and replies from the ETS table in accordance with **Zipf** distribution. Tested the simulator for **90k** users.
- **SCAN-X Web Application** Jan 2022
Developed a web application that supports the hospital management system with a **centralized** server architecture, including features such as patient records, nearby hospitals, PDF generation with a real-time database, and connection with a native mobile application. *Technologies: Javascript, Firebase, SQL, Google API*
- **Facebook Friend Recommendation** Sep 2021
Model to predict missing links to recommend friends (suggestions/connections/followers) using **graph mining**. The statistics are used like the **Jaccard index** and the page rank method algorithms.
Technologies: Python3, Google Colab, Network Nx, SQLite
- **Interactive Resume - Portfolio** Jul 2021
Coded my resume as a game by putting in over 200 hours and using different moving props and levels using **Phaser JS**. It is hosted at [www.akashkumar.tech]. *Technologies: HTML5, CSS3, Phaser JS*

Awards and Extra-Curriculars

- **ACM ICPC** (The Olympics of Programming) Regionalist 2019.
- Week Leader at HackerEarth - Global rating of **172**, Secure **1st** rank in **CodeNcounter**, **Code Alchemist**.
- Winner of Smart India Hackathon, Days of Hack, and HackCBS Hackathons.
- Awarded G&D Renwick Engineering scholarship of **\$20k** for outstanding academic and research performance.
- Tech Blog: Attracted traffic of more than **30k+** users for my technical articles. [<https://akash-kumar916.medium.com/>]