AKASH KUMAR

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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 (GPA – 8.23/10.0)
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 step 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 reduced 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 Clone   Nov 2022
- Created a highly efficient **Twitter clone** 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 statistic 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

- **AMC 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 **20k+** users for my technical blogs. (link)