

KARAN CHOPRA

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EDUCATION

University of Washington, Bothell, WA | *Master of Science, Computer Science and Software Engineering* September 2022 - May 2024
Coursework: Algorithm Design and Analysis, Distributed Computing, Software Architecture, and Evaluating Software Design. [GPA: 3.71/4]

Guru Gobind Singh Indraprastha University, India | *Bachelor of Technology, Information Technology* August 2014 - May 2018
Coursework: Data Structures & Algorithms, Object Oriented Programming, Operating system, DBMS, and Computer Networks. [GPA: 7.6/10]

WORK EXPERIENCE

Signify

Seattle, USA

Founding Engineer

June 2024 – Present

- Developed version 0 of AI-powered Compliance Management System for Manufacturing.
- Tech Stack: **JavaScript, TypeScript, Prisma ORM, Tailwind CSS, Remix, Clerk, PostgreSQL, Docker, Git, GCP, and OpenAI.**

University of Washington

Bothell, USA

Full Stack Developer

June 2023 – May 2024

- Collaborated with project lead to enhance and transition a teaching tool web application for faculty-student interaction at the University of Washington to an open-source and live platform. Backend: **Python with Flask**; Frontend: **Redux** and **React**; Database: **MySQL**.
- Instituted **CI/CD pipelines**, acceptance testing, and **Agile** methods, capitalizing **MS Azure** and Kanban for efficient project management.

Accenture

India

Software Engineer

April 2020 – August 2022

- Elevated user engagement by 25% and improved operational efficiency by 20% over 6 months by integrating 15+ third-party services into a client's web application leveraging **Java, Spring Boot, and MS SQL**.
- Engineered interactive, responsive **React JS** dashboards for enhanced user experience, amplifying engagement and saving 15% time.
- Designed a highly scalable **Apache Kafka** streaming application processing 200K-500K topics daily, reducing backend server workload.
- Developed **RESTful APIs** serving data in **JSON** to **front-end** based on changing user inputs handling over 30,000 users.
- Wrote **PowerShell** script analysing network load on MS SQL database, notifying bottlenecks, resulting in 30% less downtime.
- Constructed **Jenkins** script to automate CI/CD pipelines to build, test, and deploy processes, reducing time by 20%.
- Built Java **JUnit** tests, increasing code coverage by 35% and **code reviews**, reducing errors by 20%, and boosting code quality by 15%.
- Led a 3-member team in documenting codebase on **GitHub Wiki**, resulting smooth teamwork, and following best practices.

Associate Software Engineer

October 2018 – March 2020

- MF Cataloging: Transitioned Mutual Funds [MF] catalog from **SQL** to Elasticsearch using **Spark SQL**, UDFs, and data frames, with **Apache Airflow** for scheduling and monitoring, reducing master database load and improving API response speed by 40%.
- MF parsing: Programmed AMC [Asset Management Company] statement parsing system with Gmail integration and **AWS SQS** for automated tracking, retrieval, and management of failed messages.
- Implemented REST APIs with Spring Boot and **Hibernate**, enhancing event management and propelling a 40% improvement in coordination and a 30% user increase in the client platform's event module over 6 months due to improved usability and functionality.
- Engaged **CSS3**, and **HTML5** for design/animations and **Redux**, RESTful APIs for efficient state/data management saving 9% time.

National Informatics Centre

India

Software Engineering Intern

May 2017 – July 2017

- Crafted validation forms on **.NET** framework with HTML, CSS for UI, and stored procedures in **MS SQL server** reducing user input errors by 25% and boosting data retrieval speed by 15%.

PROJECTS

- P2P Online Tic Tac Toe (Java, J-Frame, JSCH, and Java Socket)** - A networked Tic Tac Toe game for real-time play between remote users or a single user against an automated opponent, executing Java Socket connections to improve latency by 30%. ([Link](#))
- Flight Data Analysis (Java, JSCH, Apache Storm, HTML, and Zookeeper)** - Analysed 40 major US airports traffic through distributed data streaming of flight data using Apache Storm and Zookeeper for cluster management. ([Link](#))
- Mobile-Agent-Execution-Platform (Java and JSCH)** - A Java-based mobile-agent platform exercising RPC, late binding, and object serialization, optimizing task execution across distributed networks by 45%. ([Link](#))

SKILLS

Languages:	Java, Python, Go, C++, JavaScript, Typescript, HTML, CSS, and SQL.
Cloud:	AWS Elastic Beanstalk, AWS Lambda, Amazon EC2, Amazon SQS, Amazon S3, GCP and Azure.
Databases & Tools:	MongoDB, DynamoDB, MySQL, PostgreSQL, MS SQL, Git, GitHub, Visual Studio Code, IntelliJ, and PyCharm.
Frameworks:	Spring-Boot, React, Node.js, Flask, Apache Kafka, Redux, JUnit, Apache Airflow, Docker and Postman.
Work Areas:	Distributed Systems, Backend Development, and Full Stack Development.