

Shreshth Kharbanda

skhar@uw.edu | (404) 510-6272 | Seattle, WA | kharbandas.com | [linkedin.com/in/skharbanda/](https://www.linkedin.com/in/skharbanda/)

Skills

Front-End: TypeScript, JavaScript, React.js, Next.js, Vue.js, React Native, HTML, CSS

Back-End: Java, Spring, JavaScript, Node.js, Python, C, C++, C#, RESTful APIs

Machine/Deep Learning & Big Data: Python, Tensorflow, PyTorch, GPU (CUDA), LLMs, SQL, NoSQL (MongoDB)

Tools/Technologies: AWS, GCP, Terraform, Docker, Jenkins, Android Studio, Git, NPM, Linux, Jira, Confluence

Experience

Software Engineer, Amazon

June 2023 – Present

- Reduced DLQ debug time by 60% for **Distributed Systems** handling 3B+ messages/month using **Python, Vue.js, TypeScript**, and **AWS (ECS, S3, Lambda, CloudWatch, CDK)**
- Optimized author payouts of \$50M+/month for Kindle Direct Publishing by building features in **Java (Spring)**
- Mitigated 165,000+ hours of manual effort by designing a data integrity algorithm in **Java, TypeScript, AWS**

Software Engineer, University of Washington

April 2022 – Present

- Led internationalization of an educational social media with 500,000+ visitors using **JavaScript, AWS**
- Leveraged **PyTorch, AWS Glue, Redshift, D3.js** to store, analyze, and visualize data saving 1,000+ hours

Software Engineer Intern, Tesla

January 2023 – June 2023

- Revamped applications with 60,000+ weekly visitors leveraging **React.js (Next.js), Node.js, C#, Jenkins**
- Overhauled web application for 20,000+ weekly visitors in 25+ locales with **React.js, Node.js, C#, SQL**
- Implemented mobile app features for 10,000+ weekly users with **React Native, Node.js (RESTful APIs)**

Software Engineer Intern, Chewy

June 2022 – August 2022

- Reduced micro-frontend load speeds by 300% for 20 million users with caching solutions in **React.js, Next.js**
- Solved various bugs for 300+ users/week leveraging **Node.js (RESTful APIs), Jenkins, Terraform, Docker**

Software Engineer Intern, CodeLabs

June 2020 – August 2020

- Developed an **Android** application with **Java** and **XML** to combat misinformation with 30+ beta testers
- Designed a bias detection model achieving 80% accuracy with **TensorFlow** in news articles

Founder & Software Engineer, JoDi Services

April 2020 – May 2022

- Drove 25+ digital transformation projects using **React.js, React Native, Java, Node.js, Python, AWS, GCP**
- Revamped 10+ apps improving engagement 35% on average using **React.js, React Native, Node.js**
- Created an events' recommendation system using **PyTorch, AWS DynamoDB, Node.js** with 80% accuracy

Projects

Distributed Systems: Built scalable, linearizable data storage system

- Built a data storage system handling 1,000,000+ operations/sec with load balancing and sharding in **Java**
- Enabled 99.999% uptime and consistency across servers during failures and partitions using **Paxos**
- Developed atomic multi-key transactions with 2-phase commit reducing errors by 95%, leveraging **JUnit**

C & C++: Multi-Threaded Search Engine

- Built a search engine processing 100,000+ documents in **C, C++** with dynamic indexing
- Enabled secure and concurrent request handling to reduce server response time by 30% using **Boost, STL**
- Optimized tool using **multithreading**, big-endian handling, and architecture-neutral data marshalling

Deep Learning & Generative AI: Image Generator & Caption Generator

- Built image/caption generator models leveraging **PyTorch (GANs, CNNs, RNNs, Transformers)**
- Improved performance of image classification to obtain 67% through self-supervised pretraining
- Overhauled algorithm to generate images with 99% accuracy on MNIST with **Deeply Convolutional GANs**

Education

University of Washington – Seattle

September 2021 – June 2024

B.S. Computer Science (Specialization: Systems Development)

- Coursework: Distributed Systems, Data Structures & Algorithms (**Java**), Hardware Systems (**C, C++**), Deep Learning, AI, ML, (**Python, PyTorch**), Computer Vision (**C, C++**), Software Design (**Java, TypeScript**), Databases (**SQL**)
- Organizations/Clubs: Algorithmic Trading Club, Computing Community, Indian Student Association