

HARSH KASHYAP

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github.com/Harsh23Kashyap | harshkashyapporfolio.netlify.app | leetcode.com/Harsh23Kashyap | Certificates

Skills

Languages & Backend: Java (Spring Boot), Python, C/C++, REST API, SQL

Web & UI: HTML, CSS, JavaScript, Oracle JET, KnockoutJS, Streamlit, Swift, SwiftUI, Flutter

Cloud & Infra: AWS (EC2, S3, SES, DynamoDB), Docker, Jenkins, Cloudflare, CI/CD

Data & AI: XGBoost, Keras/TensorFlow, FAISS, RAG, Generative AI (GenAI) applications

Tools & Others: Git/GitHub, Postman, Splunk, Shell Scripting

Experience

Full Time

Apple | Software Engineer 2

December 2023 – Present

- Engineered a **Swift desktop application** that replaced terminal-based 5G protocol testing workflows using **Swift, OpenAPI, C++, Python, and shell scripting**, resulting in an **80% migration from terminal to GUI** and substantial gains in developer productivity.
- Built an in-house **XML Editor in SwiftUI** to substitute third-party Radisys and OSS ASN.1 tools, enabling full internal testing capabilities and contributing to **projected savings of \$100 per Modem Functional test**.
- Implemented a dynamic **pre-validation framework for LTE/NR message creation** that automatically handled interdependent component checks, reducing **debug time from 20 minutes to under 2**.
- Architected and launched a **full-stack PIT triage automation pipeline** using **LLM agents, Docker, Jenkins APIs, log embeddings, and self-learning error classifiers**; integrated **S3 caching, retry logic, tar compression, and Slackbot delivery** to automate CI-triggered triage for **1,050+ tickets across 60+ engineers**.
- Executed the end-to-end bring-up of Apple's **cellular lab in India** using **USRP X410/B210, base stations, modems, and UEs**, enabling **HDR (High Data Rate)** validation and functional testing.
- Supervised and guided **2 interns** in developing an **AI-powered Workspace Optimizer** leveraging **RAG, contextual embeddings, and Pinecone Vector DB** for one-click provisioning and iterative remediation, reducing manual effort by **73%**.

PayPal | Software Engineer

July 2023 – October 2023

- Improved the Global Merchant Lending admin tool, driving **13% audit efficiency gain** by automating manual workflows using **React, Node.js**, and internal PayPal frameworks; ensured **CECL compliance**.

Internships

Apple | Software Developer Engineering Intern

January 2023 – June 2023

- Created an internal single-page application (SPA) utilizing **OracleJet, HTML, CSS, Knockout.js, Spring Boot, Aluminum, Splunk, and other internal frameworks**, leading to an **impressive 83% reduction in support turnaround times** through the optimization of cross-domain access and reduction in complexity.
- Designed and deployed an ML pipeline (**XGBoost + feature engineering**) to predict SLA resolution times with **80%+ accuracy**, reducing SLA breaches by **25%** across IS&T and ticket incidents.

Tata 1mg | Engineering Intern

October 2022 – November 2022

- Utilized **Asyncio, Celery, and RabbitMQ** to orchestrate asynchronous task scheduling, delivering **operational efficiencies for 3,000 employees** in mail scheduling and projecting potential benefits for **over 4 million customers**.

Cisco | Technical Undergraduate Intern

June 2022 – July 2022

- Conducted SDWAN network data analysis, created an internal dashboard displaying Quality of Service metrics, and achieved a **23.2% efficiency improvement using Data Science, Python, and networking tools**.

Licious | Software Developer Intern

January 2022 – May 2022

- Successfully migrated sections of the application from **Swift to Flutter**, involving extensive **refactoring of over 5,000 lines of code** and resulting in an **estimated 30% reduction in man-hours** and **improved app stability**.

YASH Technologies | Software Engineering Intern

July 2021 – September 2021

- Collaborated on the development of an Employee Management System portal using **SpringBoot**, successfully integrating a database for attendance tracking of **over 6,000 employees**, resulting in significant cost savings.

Research

Professor Dennis Shasha | New York University

- Developed **CustomNerd**, a modular framework at **New York University (NYU)** for building domain-specific expertise systems using shared core components; deployed instances including **DietNerd** (PubMed), **WirelessNerd** (3GPP), **InvestorNerd** (Yahoo Finance), and **NerdMama**, incorporating domain-specific data sources, reliability assessment, and safe LLM design on **AWS EC2/S3** with **Cloudflare, AWS Load Balancer**, and OTP-based login via **DynamoDB** and **SES**.

Professor Parteek Kumar | Washington State University

- Worked on **Agentic Job Matching**, prototyping a dual-agent matching system on **AWS** that used JSON-based negotiation via **EventBridge**, semantic search in **Amazon OpenSearch**, and embeddings with fairness analysis in **SageMaker Clarify**.

Education

B.E., Computer Science	2019 – 2023	Thapar Institute of Engineering and Technology	9.71 CGPA
Class XII (ISC)	2019	Mount Assisi School	96.25%
Class X (ICSE)	2017	Mount Assisi School	94.33%

Achievements

- Awarded the **TIET Merit Scholarship** for ranking in the **top 0.5% all four years** of academic studies.
- Ranked **89th out of 100,000** students in the IICC by AICTE coding competition.
- Featured in Apple's Innovation Deck for an idea on Apple Pay, selected out of 350+ submissions.