

# Shreyansh Kabra

Los Angeles, CA · +1-(213)284-5169 · [kabras@usc.edu](mailto:kabras@usc.edu) · [LinkedIn](#) · [Github](#) · [Portfolio](#)

## EDUCATION

### Master of Science, Computer Science

Jan 2025 – Dec 2026 (Expected)

*University of Southern California, Los Angeles, California*

**Relevant Coursework:** Data Structures and Algorithms, Web Technologies, Machine Learning for Data Science, Applied Natural Language Processing, Database Systems

### Bachelor of Technology, Computer Science and Engineering

Aug 2018 – May 2022

*JECRC University, Jaipur, Rajasthan*

**Relevant Coursework:** Object Oriented Programming with C++, Software Engineering, Data Structures and Algorithms, Database Management Systems, Python Programming, Software Project Management, Artificial Intelligence, Big Data Analytics, Data Mining and Warehousing, Machine Learning

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, C++, SQL, HTML/CSS

**Frameworks:** Django, DRF, Pandas, NumPy, Node.js, React.js, TensorFlow, Keras, FAISS, Hugging Face

**Tools & Platforms:** Google Cloud Platform, Git, ServiceNow, Postman, Android Studio

**Databases:** MongoDB, PostgreSQL

**Concepts:** Machine Learning, Natural Language Processing, RESTful Architecture, Distributed Systems, Microservices, Asyncio, Data Structures, RAG, LoRA

## PROFESSIONAL EXPERIENCE

### Cloud Developer 1

Aug 2022 – Dec 2024

*Hewlett Packard Enterprise*

*Bangalore, India*

- Engineered 100+ RESTful APIs using Python, Django, and DRF for the GreenLake edge-to-cloud platform, facilitating high-volume data synchronization between PostgreSQL and ServiceNow instances.
- Architected an asynchronous email notification system (API + UI), decoupling message processing from the main thread; improved system throughput by 80% and reduced request latency.
- Optimized cross-module integrations for the Service Insights Portal, streamlining task management workflows and reducing submission errors by 50% through enhanced validation logic.
- Mentored 3 junior developers on code best practices and API design patterns while collaborating with global cross-functional teams to accelerate feature delivery cycles.

### R&D Intern, NaaS Team

Jan 2022 – Aug 2022

*Hewlett Packard Enterprise*

*Bangalore, India*

- Developed an asynchronous Python package to automate network device calibration, eliminating over 90% of manual work and accelerating task completion, boosting system reliability at scale.
- Streamlined troubleshooting report generation and execution workflows, reducing task completion time by 50% and overall manual effort by 70%.

## ACADEMIC PROJECTS

### Mental Health Signal Detector (NLP, RAG, RoBERTa, FAISS)

Aug 2025 – Dec 2025

- Engineered a hierarchical NLP framework to classify mental health intent and concern levels, achieving a 0.81 F1 score by fine-tuning RoBERTa-Large using LoRA (Low-Rank Adaptation) for memory efficiency.
- Architected a Retrieval-Augmented Generation (RAG) system leveraging FAISS for vector similarity search and Flan-T5 to generate grounded, safety-compliant support suggestions.
- Built a hybrid data engineering pipeline to curate 6,000+ training samples, utilizing Zero-Shot Classification (BART) and Regex patterns to bootstrap labels and overcome data scarcity.

### Transfer Learning for Image Classification (Keras, TensorFlow)

Jun 2025 – Jul 2025

- Developed a waste image classification system using transfer learning with pre-trained CNNs (EfficientNetB0, ResNet50/101, VGG16) across 9 categories, achieving 83% validation accuracy and 97.66% AUC with EfficientNetB0.
- Enhanced model performance by applying data augmentation, early stopping, learning rate scheduling, and class weight balancing; leveraged TensorFlow/Keras, OpenCV, and scikit-learn for training and evaluation.

### Artist Search Platform (React.js, Node.js, Kotlin, MongoDB)

Mar 2025 – May 2025

- Crafted a full-stack application including a React.js web app and native Android app (Kotlin, Android SDK), powered by a Node.js + Express backend, integrating the Artsy API to deliver data on 100,000+ artists and artworks.
- Designed secure, scalable data management using structured MongoDB collections and JWT-based authentication, ensuring reliable access control and session security.
- Optimized frontend performance and accessibility, achieving 100% Lighthouse scores for both mobile and desktop.