

KRISHIV KHAMBHAYATA

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TECHNICAL SKILLS

Languages: Python, Java, C, SQL, JavaScript, HTML, CSS

Frameworks/Libraries: Django, FastAPI, Flask, React, Vue.js, SQLAlchemy, NumPy, Matplotlib

Tools/Technologies: Git/GitHub, Jinja2, REST APIs, Postman, WSL, Jupyter Notebook

Databases/Storages: MySQL, PostgreSQL, sqlite, Cloudflare R2

EXPERIENCE

Software Developer | *KHJ Transcriptions*

May 2025 — Present

- Created a file-sharing app using Django with per-tenant database provisioning and secure storage via Cloudflare R2.
- Contributed to a production-scale healthcare application by building API endpoints, optimizing database queries for faster response times, and resolving backend performance issues.
- Worked extensively with multi-tenant authentication, database operations using Django's ORM, QuerySet filtering, form handling, frontend templating, in a collaborative work environment.

PROJECTS

Salt and Prepper | *Flask, Vue.js, SQLAlchemy, Celery, Redis, Chart.js, SMTP*

- Created a platform containing quiz creation and attempt workflows with score management and exam interface.
- Wrote relational database schemas using SQLAlchemy to optimize Object-Relational Mapping (ORM) operations.
- Designed Vue.js SPA with Vue Router, Bootstrap 5, and Chart.js for analytics and performance tracking.
- Integrated Celery with Redis to automate monthly performance reports and daily quiz reminders via scheduled tasks.

Career / Conquer | *Python, Flask, Mediapipe, GemmaAI*

- Made a mock interview platform with real-time verbal interaction using speech-to-text and text-to-speech pipelines.
- Integrated Gemma API to dynamically generate questions tailored to each user's uploaded resume.
- Configured webcam-based behavior analysis using Mediapipe to track eye contact, expressions, and speech.
- This allows the project to detect decline in confidence during the mock interview and provide an evaluation at the end.

PSR Image Denoising | *Python, PyTorch, NumPy, SciKit-Image*

- Presented at national Smart India Hackathon 2024 under the name Chandrakriti, winning 1st place under ISRO.
- Developed a CNN model based on UNet architecture to denoise images of Moon's Permanently Shadowed Regions.
- Pre-processed sunlit OHRC images by adding artificial noise mimicking PSR characteristics.
- Trained on a custom dataset of 850+ pre-processed OHRC images paired with high-resolution ground truth images to create noisy-clean pairs for model training.

Project Selene | *Python, Flask, NumPy, Pillow, Trimesh, Three.js*

- Constructed a web application to convert OHRC lunar images into interactive 3D terrain models.
- Built image processing pipeline using NumPy/Pillow for grayscale extraction and Trimesh for 3D terrain generation.

ACHIEVEMENTS

Smart India Hackathon 2024

1st Place

National winner of SIH'24, India's biggest Hackathon, under ISRO as a member of Team ChandraKriti.

Tic Tech Toe 2025

2nd Place

Secured 2nd place among 175 teams at TTT '25, organized by DAIICT University, by presenting *Career/Conquer*.

SAL IDEAthon 2024

2nd Place

Secured 2nd place at SAL-SSIP's inter-branch Ideathon by presenting *Project Selene*.

CERTIFICATIONS

Postman API Fundamentals Student Expert Certification

November 2024

Certified in API fundamentals including GET/POST/PATCH/DELETE, Query Parameters, Authorization headers.

Foundation in Programming and Data Science

September 2024

Awarded by Indian Institute of Technology Madras for completing Foundation Level in Programming and Data Science.

EDUCATION

Gujarat Technological University

Ahmedabad, Gujarat

Bachelor of Engineering (B.E.), Computer Engineering

June 2023 — July 2027

Indian Institute of Technology, Madras

Chennai, Tamil Nadu

Diploma in Programming

September 2023 — May 2026