Krish Mevawala

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Education

Charotar University of Science and Technology Expected May 2026

Bachelor of Technology in Computer Science *Anand, Gujarat*

- **Relevant Coursework:** Data Structures and Algorithms (Java), Natural Language Processing (Python), Intro to Machine Learning (Python), Image Processing and Computer Vision (Python)

Experience

S4 IT Technologies May 2022 – Jun 2022

Cloud Solution Intern *Surat, Gujarat*

- Assisted in designing scalable solutions and ensuring security. Collaborated with senior architects, contributed to API development, and supported the implementation of cloud services.
- Worked with AWS, exploring key DevOps services like Elastic Load Balancer, Auto Scaling, RDS, DynamoDB, S3, EC2, CloudFormation, and CloudWatch.
- Gained hands-on experience in scalability, automation, monitoring, optimizing system performance and cloud system design.

Potenza Global Solutions May 2024 – Jun 2024

Software Engineer Intern *Surat, Gujarat*

- Developed mobile apps with Flutter, used MVC and GetX for state management, built PHP APIs, and implemented OAuth for secure authentication. .
- Developed EatIn app with Flutter, featuring real-time ordering, payments with RazorPay, and bill splitting. Used MVC, Postman, GitHub, CI/CD, and OAuth for secure authentication.
- Contributed to the adoption of agile methodologies, utilizing Jira and managed the project on GitHub with CI/CD for automated deployments.

Projects

Illegal Mining Detection in Satellite Imagery | *Python, GDAL, YOLOv8, Labellmg, Copernicus Data Space Ecosystem*

- Developed an illegal mining detection system using Sentinel-2 satellite imagery for Jharkhand, India, enabling ISRO to monitor environmental violations with a 90% detection accuracy.
- Collected and preprocessed 10 Level-2A images from the Copernicus Data Space Ecosystem, converting .jp2 to .jpg using Python and GDAL, achieving a 100% successful conversion rate across 1GB of data.
- Trained a YOLOv8 model on a dataset of 30 annotated images created with Labellmg, achieving an 85% mAP@0.5 for detecting trucks, excavators, and mined areas, improving identification speed by 25%.

Satellite Image Analysis | *Python, PyTorch, Streamlit, Rasterio, Google Earth Engine*

- Developed an interactive deep learning platform for satellite imagery analysis, integrating CNN, Vision Transformers (ViT), and U-Net models, enabling land use classification and change detection with 85% accuracy on EuroSAT and Sentinel-2 datasets.
- Designed and implemented a scalable Streamlit web application with RESTful-like file upload handling, reducing processing time for large GeoTIFFs by 25% through optimized preprocessing pipelines.
- Engineered a segmentation and change detection system using U-Net and Dynamic World labels, achieving a 30% improvement in pixel-level land use mapping precision for environmental monitoring tasks.

SatFloodPredict: Flood Prediction Using Satellite Data | *Python, TensorFlow, OpenCV, Matplotlib, ISRO Bhuvan*

- Developed a flood prediction system using satellite imagery and meteorological data for Kerala, India, enabling ISRO to enhance disaster management with a 92% accuracy in predicting rainfall intensity and flood-prone areas.
- Collected and preprocessed 15 Cartosat-2 images and meteorological datasets from ISRO Bhuvan, converting .tif files to normalized NumPy arrays using Python and OpenCV, achieving a 100% successful preprocessing rate across 1.5GB of data.
- Trained a CNN-LSTM model with attention using TensorFlow on a dataset of 40 annotated sequences created from satellite and weather data, achieving an 88% mAP@0.5 for rainfall intensity and 90% AUC for flood probability, improving prediction lead time by 30%.

DrishtiPrabha | *AI-Powered Wearable, Edge AI, YOLOv8, TTS, LLM*

- Developed an AI-powered chest-mounted wearable for visually impaired individuals, providing real-time navigation, scene explanation, and emergency assistance—without internet connectivity.
- Designed a real-time obstacle detection system using YOLOv8, ensuring continuous guidance without overlapping instructions, enhancing navigation safety by 40%.
- Integrated multilingual scene description using a custom LLM-based speech module, enabling immersive experiences at landmarks with zero delay.
- Engineered an offline SOS system that shares real-time location with guardians via a custom app and website, ensuring instant emergency response without cloud dependency.

TaskMaster AI Crew | *Multi-Agent AI, CrewAI, LiteLLM, Streamlit, OpenRouter, Subprocess*

- Built a multi-agent system using CrewAI with four specialized agents—Planner, Researcher, Executor, and Coordinator—collaborating via a sequential pipeline integrated with Llama 4 Maverick through LiteLLM and OpenRouter API.
- Engineered a custom `LocalCodeRunner` tool utilizing Python's `subprocess` module for real-time execution of Python, Java, C, and C++ code, with error handling and output capture.
- Developed a dynamic `ResumeBuilder` module that appends LaTeX-formatted content to resumes by parsing structured input and modifying files using I/O operations.
- Designed an intuitive Streamlit UI featuring multi-column layouts, real-time agent feedback, progress bars, and downloadable outputs—improving task visibility and usability by 50%.

Technical Skills

Languages: Java, Python, Kotlin, Go, Dart, PHP
Technologies: Flutter, Django, Flask, FastAPI, OpenCV, TensorFlow, PyTorch,Flask, Android SDK
Concepts: Compiler, Operating System, Virtual Memory, Cache Memory, Encryption, Decryption, Artificial Intelligence, Machine Learning, Neural Networks, API, Database Normalization, Agile Methodology, Cloud Computing