

KARAN TEJ

Forward Deployed Engineer | AI/ML, Generative AI, Cloud and DevOps
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PROFESSIONAL SUMMARY

Computer Science undergraduate (CGPA 9.38/10.0, top 10 percent of class) who builds AI and machine learning systems end to end in Python and SQL, from data preprocessing and model training to evaluation and deployment. Hands-on with deep learning, natural language processing (NLP), computer vision, and generative AI (GenAI) using PyTorch, TensorFlow, and scikit-learn. Ships code with Docker, Kubernetes, CI/CD pipelines, Git, and GitHub, and is currently building an autonomous AI SRE agent on Kubernetes. As AI/ML Tech Lead on the QARC Committee, gathers requirements from faculty stakeholders, scopes them into deliverables with measurable success criteria, and mentors a student engineering team. Seeking a Forward Deployed Engineer role to build and deploy AI solutions with customers.

TECHNICAL SKILLS

Programming Languages: Python, SQL, C/C++ and Java

Generative AI and LLMs: Generative AI (GenAI), Large Language Models (LLMs), AI Agents, Prompt Engineering, Retrieval-Augmented Generation (RAG), Transformers

Machine Learning and Deep Learning: Deep Learning, Neural Networks, Natural Language Processing (NLP), Computer Vision, Object Detection, Supervised Learning, Unsupervised Learning, Classification, Regression, Clustering, Anomaly Detection, Explainable AI (XAI), Model Interpretability, Feature Importance

DevOps and MLOps: Docker, Kubernetes, Containerization, CI/CD Pipelines, Git, GitHub, Version Control, Linux, Cloud Operations (CloudOps), Site Reliability Engineering (SRE), Reproducible Experiments

Libraries and Frameworks: PyTorch, TensorFlow, scikit-learn, pandas, NumPy, OpenCV, Matplotlib, Seaborn

Data and Analytics: Data Pipelines, Data Preprocessing, Data Cleaning, Feature Engineering, Exploratory Data Analysis (EDA), Data Visualization, Statistical Analysis, Model Evaluation, Precision, Recall, ROC AUC, Cross-Validation, Class Imbalance, Hyperparameter Tuning, Time Series Analysis, Backtesting

Security and Networking: Cybersecurity Fundamentals, Computer Networking, Network Security, Intrusion Detection Systems (IDS), Security Event Logs, Log Analysis, Threat Detection, Fraud Detection, Alert Triage

Databases and Tools: MySQL, Jupyter Notebook, Visual Studio Code, Microsoft Excel, Arduino

Professional Skills: Stakeholder Communication, Requirements Gathering, Solution Scoping, Rapid Prototyping, Problem Solving, Debugging and Troubleshooting, Technical Documentation, Team Leadership, Technical Mentoring

EXPERIENCE

AI/ML Tech Lead | QARC Committee, Sri Siddhartha Institute of Technology

Tumakuru, Karnataka, India | February 2026 to Present

- Direct a student engineering team across three machine learning projects in anomaly detection, computer vision, and risk modeling, owning technical direction from problem definition through evaluation.
- Gather requirements from faculty stakeholders and turn open-ended research questions into scoped deliverables with measurable success criteria and defined evaluation metrics.
- Review model architecture decisions, run training experiments, and debug data pipelines in Python, using Git and GitHub for version control and reproducible experiment tracking.
- Mentor team members in Python and scikit-learn across end-to-end machine learning workflows covering data preprocessing, feature engineering, model selection, and model evaluation.

PROJECTS

Autonomous CloudOps Engineer: AI SRE Agent on Kubernetes (In Progress)

Kubernetes, Docker, Generative AI, LLMs, AI Agents, CI/CD, Python | October 2026 to Present

- Building, with one teammate, an autonomous AI SRE agent on Kubernetes that automates routine cloud operations.
- Designing the agent to watch cluster health, diagnose failing workloads from Kubernetes events, logs, and metrics using large language model (LLM) reasoning, and recommend or apply fixes.
- Containerizing services with Docker and shipping each change through CI/CD pipelines on GitHub.

AI SOC Analyst: Behavioral Anomaly Detection for Security Event Logs

Python, scikit-learn, Unsupervised Learning, Anomaly Detection, Security Analytics | September 2025 to December 2025

- Designed an unsupervised anomaly detection system that models normal user and system behavior in security event logs and flags deviations from it, the same detection pattern used in machine learning-based intrusion detection systems (IDS).
- Preprocessed raw activity logs into an interpretable feature set covering session frequency, access patterns, and time-of-day deviations, so that every flagged event can be traced back to the features that produced it.
- Automated alert triage by ranking anomalies on a severity score, cutting the volume of events that required manual analyst review against the unfiltered event stream.
- Documented the pipeline end to end in Python so that preprocessing, scoring, and ranking can be reproduced from raw logs.

Risk Engine: Explainable Risk Scoring and Fraud Detection Model

Python, pandas, scikit-learn, Statistical Modeling, Predictive Modeling | May 2025 to August 2025

- Developed a risk scoring engine pairing statistical methods with supervised classification models to rank exposure across historical records, handling missing values, outliers, and class imbalance in pandas.
- Validated model performance through back testing and 5-fold cross-validation, reporting accuracy and area under the curve (AUC) against a baseline model rather than a single train-test split.
- Exposed feature importance behind each score so the output is interpretable to a reviewer instead of an opaque number, and extended the engine to credit scoring, fraud detection, and stress-testing scenarios.

Fleet Detection: Vehicle Analytics Platform

Python, OpenCV, Computer Vision, Object Detection, Deep Learning | January 2026 to April 2026

- Built an object detection and tracking pipeline in Python and OpenCV that identifies and classifies vehicles across video streams and still images.
- Engineered an image preprocessing and augmentation pipeline that expanded a limited training set and raised recall on underrepresented classes, directly addressing class imbalance in the detection task.
- Measured detection quality with mean average precision (mAP) and per-class recall, tuning confidence and intersection-over-union (IoU) thresholds to reduce false detections.

ACHIEVEMENTS

- 2nd Place, Code Buzz, a data structures and algorithms (DSA) competition at Sri Siddhartha Institute of Technology.
- Winner, Arduino Workshop Competition.

EDUCATION

Bachelor of Technology (B.Tech.), Computer Science and Engineering

Sri Siddhartha Institute of Technology, Tumakuru, Karnataka, India | September 2024 to August 2028

- CGPA: 9.38/10.0, ranked in the top 10 percent of the class.
- Coursework: Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Computer Networks, Software Engineering, Probability and Statistics, Optimization, Database Management Systems.

CERTIFICATIONS AND LANGUAGES

- Data Science, Machine Learning, Deep Learning and NLP Bootcamp, KRISHAI Technologies, 2025.
- English (C1, Advanced).