

Tejal Anavekar

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EDUCATION

University of Southern California

Los Angeles, CA

Master of Science in Computer Science

Aug 2024 – May 2026

- Relevant skills: Analysis of Algorithm, Database management, Applied Natural Language Processing, Machine Learning for Data Science, Information Retrieval

Fr.C.Rodrigues Institute of Technology

Mumbai, India

Bachelor of Engineering in Information Technology

Jul 2020 – Jun 2024

- Relevant skills: Operating Systems, Computer Networks, Machine Learning, Artificial Intelligence, Data Science, Data Mining, Big Data

TECHNICAL SKILLS

Programming Languages: Python, C, C#, HTML, CSS, Javascript

Systems & OS: Linux/Unix, Shell Scripting, TCP/IP, HTTP/HTTPS, Load Balancing

Framework: ASP.NET Core, .NET, ReactJs, NodeJs, ExpressJS, APIs

Libraries: PyTorch, Scikit-learn, Keras, OpenCV, TensorFlow, Bootstrap, Pandas, NumPy, Seaborn, Matplotlib

Databases & Cloud : SQL, Mongo DB, PostgreSQL, Firebase, AWS (EC2, S3), GCP

EXPERIENCE

Software Developer

Sept 2024 – Present

USC Institute for Creative Technologies

Los Angeles, CA

- Owned and automated production ETL pipelines using complex **SQL** and **C#**, improving reporting efficiency by **40%** and reducing manual workflows by **60%** in a live environment
- Implemented **Bash scripting on Linux** and **JavaScript** to debug historical data files and internal web tools, resolving frontend-backend failures and improving system reliability
- Built and supported production monitoring dashboards and backend data services, integrating real-time data streams to track critical financial KPIs

Data Engineer Intern

June 2025 – Aug 2025

Meta Platforms, Inc

Burlingame, CA

- Engineered **4** end-to-end scalable data pipelines on the **Reality Labs Privacy and Platform Foundations team**, enabling real-time analytics and AI readiness dashboards for billions of rows of user data
- Automated pipeline generation and data validation for AI readiness dashboards using **Python** and Meta internal tools guaranteeing scalable and dependable data workflows
- Optimized AI readiness metric computation logic, which was adopted by **3+** cross-functional teams, enhancing reporting transparency and driving more consistent performance tracking

AI Engineer

Jun 2022 – Apr 2023

Tata Institute of Fundamental Research

Mumbai, India

- Applied advanced image segmentation and **SIFT-based feature extraction**, boosting classification precision by **25%** and enabling more precise data interpretation
- Trained and deployed **Convolutional Neural Networks** (ResNet, VGG variants) to automate image classification tasks, improving accuracy and cutting processing time by 30%
- Designed modular **2** preprocessing pipelines to standardize image resolution and brightness for robust ML training across diverse datasets and imaging conditions

PROJECTS | PUBLICATIONS

Query Bot | NLP, BERT, LSTM, Pytorch

Jan 2025 – Apr 2025

- Led the development of a custom seq2seq model combining **BERT encoders and LSTM decoders** with schema-aware attention for translating natural language questions to SQL queries. Achieved 91.8% execution accuracy and 82.2% exact match on Spider dataset

GeoForecast - Weather App | MERN Stack, Flask, Swift, GCP

Aug 2024 – Dec 2024

- Built and deployed a cross-platform weather app with modular frontend-backend architecture (**React.js, Node.js, MongoDB**), hosted on **Google Cloud**. Integrated Google and Tomorrow.io APIs for geolocation, weather prediction and daily forecasts, achieving 93% location accuracy and increasing daily retention by 35%

Smart Surveillance System for Intrusion Detection | SSD, YOLO, Open CV, Tensorflow

Jul 2023 – Apr 2024

- Devised and Implemented AI-powered smart surveillance system utilizing **SSD and YOLO** algorithms for real-time leopard detection across 500 meters, achieving 92% detection accuracy with false positive reduction of 30%
<https://rjpn.org/jetnr/papers/JETNR2404011.pdf>

Plagiarism Detection System | Open CV, Django

Jan 2023 – Apr 2023

- Built a web-based **NLP tool** to detect content similarity using **TF-IDF** and **Cosine Similarity** with text preprocessing such as stemming, lemmatization increasing plagiarism detection accuracy by 40%