

# Niraj Yagnik

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## EDUCATION

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### University of California, San Diego

La Jolla, California

*Masters of Science in Computer Science; GPA: 4.0/4.0*

*Sep 2022 – June 2024*

- **Relevant coursework:** Recommender Systems, Data Systems for ML, Statistical NLP, Software Engineering

### Manipal Institute of Technology

Manipal, India

*B.Tech in Computer Engineering, Minor in Big Data Analytics; GPA: 9.34/10.00*

*July 2017 – Aug 2021*

- **Relevant coursework:** Database Systems, Software Development, Machine Learning, Big Data Analysis

## WORK EXPERIENCE

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### NanoMood Tech

San Diego, California

*Machine Learning Engineer Intern*

*June 2023 – September 2023*

- Implemented vector databases to boost **Large Language Models'** efficacy in identifying depression among Veterans, achieving a **16% increase** in clinical accuracy compared to existing benchmarks.
- Secured grants and significant funding by leading the adoption of **ensemble learning techniques** for stress detection, leveraging wearable sensor data. This directly contributed to our position as innovators in mental health technology.

### University of California

La Jolla, California

*Teaching Assistant and Graduate Student Researcher*

*Mar 2023 – Present*

- Elevated student success as **Teaching Assistant** for “**Advances in Language Models**” (Winter '24) and “**Web Mining and Recommender Systems**” (Fall '23), guiding assignments and enhancing technical understanding. Consistently received outstanding evaluations.
- As a graduate researcher, enhanced **AI explainability evaluations** by identifying challenges in **human-centric testing** by interviewing **25 pioneering researchers**, fostering methodological improvements, boosting and stakeholder trust.

### ICICI Lombard General Insurance Company

Mumbai, India

*Analyst*

*Feb 2021 – June 2022*

- Orchestrated robust data migration pipelines and ETL processes using Azure Synapse Analytics for India's Largest Private Insurance Company, catalyzing a **15% surge in retail sales** by powering data-driven strategic decisions.
- Transformed reporting by migrating from SAP BO to PowerBI, fusing data sources to **cut report generation time by over 90%**, and improved stakeholder collaboration for enhanced executive decision-making.
- Led a team of three in the seamless transition of numerous legacy on-premise analytical projects to Azure, leveraging SQL and Python for optimization. This initiative resulted in flawless migration accuracy and an **80% reduction** in load times.

### Reliance Jio

Navi Mumbai, India

*Machine Learning Intern*

*May 2019 – July 2019*

- Pioneered the development of the bagging-based Community Forest Algorithm, which improved **customer retention** by **16%** and outperformed standard ML algorithms by 14% in accuracy on the churn prediction task.

## PROJECTS

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### MedLM: Exploring Language Models for Medical Question Answering Systems | [GitHub](#)

- Led team of 4 in **fine-tuning** diverse large language models (LLMs) on the MedQuad dataset, comparing them with larger models (gpt3.5, gpt4) using direct questions and **prompt engineering**.

### Enhancing Fashion Recommendation using Visual and Temporal Features | [GitHub](#)

- Developed a visual compatibility-based recommender system that significantly outperformed the trivial baseline predictor, achieving a **remarkable 95.58%** reduction in the Mean Squared Error metric.

### Impact of Cultural Shift on Multimodal Sentiment Analysis | [GitHub](#)

- Investigated the influence of non-verbal cues, specifically facial emotions, on sentiment analysis outcomes. Published the paper in the *Journal of Intelligent & Fuzzy Systems*.

## SKILLS

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**Languages:** Python, C++, SQL, Java

**Frameworks and Tools:** Git, Transformers, Scikit-learn, Pytorch, Keras, TensorFlow, Flask, Pandas, Numpy, PowerBI, Azure

## AWARDS & ACHIEVEMENTS

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**Guest Lecturer:** *Invited to give Tech Talk* at my alma mater (Manipal Institute of Technology) on the applications of genetic algorithms to optimize **artificial intelligence to a class of 100**.

**Kaggle Competition:** Achieved **2nd** rank out of 42 in a Kaggle Advanced Text Mining challenge on the Yelp Dataset. Skillfully combining **fine-tuned BERT and ensembling techniques** for effective text classification. [Competition Link](#)

**Certificate of Academic Achievement:** Topped my batch in the fifth and seventh semesters at Manipal Institute of Technology.