

Education

University of California San Diego

California, USA

M.S. COMPUTER SCIENCE AND ENGINEERING (GPA: 4/4) [[Transcript](#)]

2022 - Mar 2024

Indian Institute of Technology Gandhinagar

Gandhinagar, India

B.TECH. WITH HONOURS IN COMPUTER SCIENCE AND ENGINEERING (CPI: 9.01/10) [[Transcript](#)]

2018 - 2022

Technical Knowledge

Programming Languages: Python, C, C++, Go, MATLAB, SQL, Verilog, JavaScript, HTML, CSS, SLURM Scripting**Tools:** Git, Airflow, PyTorch, Tensorflow, Spark, Docker, Kubernetes, ROS, OpenCV, GCP, \LaTeX , Huggingface, Databricks

Relevant Experiences

Lucid Motors

Newark, California

SR. DATA SCIENTIST | MANAGER: DR. ANURADHA KODALI

April 2024 - Present

- Joined the team and quickly made remarkable contributions by *leading the adoption of Generative AI* for automating customer care data analysis. This initiative reduced manual workforce effort by **90%**, streamlined operations, and provided valuable insights from customer feedback, resulting in potential significant process improvements.
- Enabled the transition from rule-based to *ML-driven anomaly detection* for vehicle fleet security. This enhancement significantly reduced false positives by **50%**, simplifying the validation of cybersecurity threats. Proposed and implemented feature importance techniques, which enhanced the explainability and reliability of vehicle security operations.

Nokia Bell Labs

Murray Hill, New Jersey

AUTONOMOUS SYSTEMS RESEARCH INTERN | MENTOR: MRS. BUVANESWARI RAMANAN

June 2023 - August 2023

- Leveraged large language models (LLMs) to enhance Nokia's patent-pending, proprietary MLOps platform for the end-to-end operations of ML-based use cases. [*Manuscript under review at IEEE Transactions on Artificial Intelligence*]
- Developed innovative task-specific knowledge enrichment strategies, involving automatic retrieval using Langchain and vectorstores, to improve the performance of LLMs in complicated code generation tasks.

Nanyang Technological University

Singapore

RESEARCH INTERN | MENTOR: PROF. ERIK CAMBRIA

May. 2021 - Jul. 2021

- Developed a *deep multitask learning* framework that enhances the performance of Negation Scope Detection using POS tagging as an auxiliary task. Used *transformers* and *neural tensor fusions* to leverage the inter-task correlations. Achieved **5%** improvement over the baseline models.

Publications

Automating Code Adaptation for MLOps – A Benchmarking Study on LLMs [[arxiv](#)]Accurate and Scalable Gaussian Processes for Fine-grained Air Quality Inference, **AAAI (2022)** [[doi](#)]Enhancing Negation Scope Detection using Multitask Learning, **ICDMW (2021)** [[doi](#)]Program Synthesis: Does Feedback Help?, **ACM CoDS-COMAD (2022)** [[doi](#)] [[poster](#)]Assessing the interplay between travel patterns and SARS-CoV-2 outbreak in realistic urban setting, **SpringerOpen (2021)** [[doi](#)]

Projects

Advancing Model-Agnostic Text Dataset Distillation

[GitHub Repo](#)[Arxiv](#)

UC San Diego

MENTOR: PROF. JINGBO SHANG ▷ NLP | DEEP LEARNING | EFFICIENT LEARNING

Apr. 2023 - June 2023

- Developed novel text-dataset distillation techniques that demonstrate strong cross-architecture generalization capability, enhancing efficiency and performance in natural language processing tasks. Achieved a remarkable 95% distillation ratio with just 30 samples.

Robust, Scalable, & Fault-Tolerant Networked File Storage Service

UC San Diego

MENTOR: PROF. GEORGE PORTER ▷ NETWORKED SYSTEMS DESIGN | DISTRIBUTED CLOUD COMPUTING

Jan. 2023 - Mar. 2023

- Developed a cloud-based file storage system, leveraging **gRPC** for streamlined communication, **Consistent Hashing** for efficient load balancing, and the **RAFT** consensus algorithm to ensure fault-tolerance and consistency.

Accurate and Scalable Gaussian Processes for Fine-grained Air Quality Inference

[Repo](#)[GP-Viz](#)

IIT Gandhinagar

MENTOR: PROF. NIPUN BATRA ▷ APPLIED & DATA-DRIVEN MACHINE LEARNING | BAYESIAN MODELING

Aug. 2021 - May 2022

- Implemented stationary & non-stationary probabilistic **Gaussian Process** models for urban air quality estimation - as spatio-temporal regression. Our **uncertainty-aware** approach outperformed conventional **baselines** on standard air quality datasets.

Exploring Constrained Reinforcement Learning for Autonomous Driving

[GitHub Repo](#)

IIT Gandhinagar

MENTOR: PROF. NIPUN BATRA ▷ REINFORCEMENT LEARNING | POLICY OPTIMIZATION & EVALUATION

Jan. 2021 - May. 2021

Honors and Community Engagement

2024 **Teaching Assistant - Unsupervised Learning**, UC San Diego2021 **Teaching Assistant - Machine Learning and Natural Language Processing courses**, IITGN2021 **Pull Request (PR) accepted for PyMC**, Open source GitHub package for Bayesian statistical modeling2019 **Leadership - Core Committee Member**, Amalthea - Tech Summit, Jashn - Cultural Fest at IITGN2018 **Joint Entrance Exam (JEE)**, All-India-Rank 143 out of 1.13 million candidates