

ISHIT PATEL

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IshitPatel

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EDUCATION

San Francisco State University

San Francisco, USA

Master of Science in Computer Science

Aug 2022 - May 2025

Related Coursework: Deep Learning, Artificial Intelligence, NLP, OS, Analysis of Algorithms, DBMS, Software Engineering

Indian Institute of Technology

Jodhpur, India

Bachelor of Technology - Electrical Engineering

Jul 2018 - May 2022

Related Coursework: Machine Learning, Linear Algebra and Calculus, Probability Statistics and Random Processes, Game Theory

SUMMARY

Machine Learning Engineer with a strong foundation in distributed deep learning, data analysis, model optimization, deployment, and LLM integration. Proficient in Python, PyTorch, and TensorFlow, with hands-on experience building scalable AI systems and end-to-end ML pipelines.

SKILLS

Languages: Python, C/C++, Java, Rust, CUDA, Git/GitHub, Linux/Bash

Frameworks: PyTorch, TensorFlow, Pandas, NumPy, Anaconda, Docker, Kubernetes

Machine Learning: Predictive Modeling, Clustering Models, NLP, Statistical ML, Differential Privacy

EXPERIENCE

SF State Machine Learning Laboratory | *Applied Researcher, Safety ML*

Aug 2024 – Present

- Developed a Reinforcement Learning based client selection mechanism with a novel reward function for non-IID federated learning environments.
- Achieved a 37% faster convergence and 12.5% increase in test accuracy over baseline FedAvg and reducing latency by 30% in convergence across diverse client compute environments and network capacities.
- Tools and Tech: PyTorch, TensorBoard, AWS EC2, NumPy, Pandas, Flower

C3 AI | *Software Engineering Intern*

May 2023 - Aug 2023

- Developed a classifier to identify and predict fraudulent financial activities combining a foundational KMeans clustering model with a random-forest based ensemble regularization module.
- Achieved a 25% increase in F1 score in the anomaly detection suite and a 15% reduction in false positive rate over baseline models.
- Tools and Tech.: Python, PyTorch, AWS SageMaker, MLFlow

Kroop AI | *Software Engineer, Machine Learning*

Aug 2021 - Aug 2022

- Spearheaded the design and implementation of a deepfake generation system using LatentFlow Diffusion and Wave2Lip GANs across a cross functional team.
- Engineered a robust pipeline capable of producing high-fidelity video from given audio inputs. This system integrates state-of-the-art neural rendering techniques to achieve realistic video synthesis.
- Enhanced model performance by 27% by incorporating a blend of landmark detection algorithms. Enabling quicker and more accurate video generation while reducing computational overhead.
- Tools and Tech: Python, PyTorch, Azure, Docker

Indian Institute of Management Ahmedabad, India | *ML Researcher*

May 2021 - Dec 2021

- Built an end-to-end machine learning pipeline to analyze crowdfunding dynamics using GoFundMe data.
- Attained a 40% improvement in accuracy by deploying a hybrid race classification system combining Haar Cascades and Convolutional Neural Networks to infer demographic attributes from campaign images.
- Tools and Tech: Python, TensorFlow, OpenCV, scikit-learn, Jupyter Notebook, GCP

PROJECTS

LLM Powered Document Summarization Tool | *LLM summarization, Optimization*

- Fine-tuned a pre-trained T5 model on a custom dataset of 10,000+ technical documents, achieving a 23% improvement in ROUGE-L scores over baseline summarization methods.
- Deployed the model via Flask with a lightweight front-end, enabling real-time summarization with average response latency under 500ms.
- Tools and Tech: Python, Hugging Face Transformers, PyTorch, Flask

ECCV'20 MiniCity Segmentation | *Deep learning, Semantic Segmentation*

- Implemented a multi-class semantic segmentation model using hourglass autoencoders to optimize accuracy by 15% and real-time inference speed by 1.5x over CNNs to support decision-making in autonomous driving.
- Tools and Tech: PyTorch, OpenCV, NumPy, Matplotlib, CUDA

ACHIEVEMENTS AND LEADERSHIP

- Graduate Teaching Assistant, SF State • Student Guide, Student Welfare Committee, IIT Jodhpur • Dept. Rank 1, IIT Jodhpur • Finalist, Indian National Mathematics Olympiad • Head, Ignus, IIT Jodhpur