KHUSHI NAIK

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EDUCATION

University of Southern California

Master of Science in Computer Science

Los Angeles, California August 2023-May 2025

• Specializing in Artificial Intelligence

Pandit Deendayal Energy University

Gandhinagar, Gujarat

Bachelor of Technology in Information and Communication Technology

August 2019-May 2023

May 2022-July 2022

GPA: 9.72/10

President of Fine Arts Club, Social and Cultural Committee, Co-founder of Speakers Paradise Club

SKILLS

C, Python, Java, TensorFlow, Keras, NLTK, Scikit-Learn, Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision, HTML, CSS, JavaScript, IoT, MySQL, DBMS, Docker, Natural Language Processing, Git, Calculus, Statistics, RL, POMDP, LLM

WORK EXPERIENCE

TalentServe Mumbai, Maharashtra

AI/ML Engineer and General Management Intern

Constructed a model to sort out resumes for company deploying Machine Learning algorithms

Utilized Support Vector Machine and improved its efficiency

ACADEMIC PROJECTS

Little GO Game September 2023-October 2023

- Developed a GO game for 5x5 board using alpha beta pruning and minmax algorithm
- Ability to beat manual player as well as random, alpha beta, and q learning players
- 95% accuracy in beating aggressive(Reinforcement Learning) player

Skin Cancer Detection using DL and Credibility Assessment using XAI

August 2023-December 2023

- Early detection of skin cancer using CNN, ResNet50, InceptionResNetv2, and VGG16
- Compared models using confusion matrices as well as validation accuracy, loss, recall, and ROC-AUC graphs
- Evaluated model's credibility using SHAP(SHapely Additive exPlanations) framework

Automated Drowsiness Detection in Car Drivers

December 2022-May 2023

- Drowsiness detection with Machine, Deep Learning, Computer Vision and IoT
- · Processed video dataset, worked with facial landmarks and normalization to fit the models for different individuals
- Built a model to detect fatigue in car drivers and send alerts in real-time to avoid/reduce road accidents
- Compared ML and DL algorithms by generating Confusion Matrix, F1 Score, ROC Curve and other parameters
- Configured the best performing algorithm(MLP) to develop a real-time drowsiness detector with IoT(Link)

Lung CT Image Segmentation

July 2022-December 2022

- Deployed Machine Learning algorithms with Computer Vision for early detection of Lung Tumor Nodules in CT images
- Performed image segmentation and calculated the volume of tumor nodules in CT images using novel architectures U-NET, Seg-NET and K-NN with PyTorch Lightning
- Plotted loss functions and compared the predicted results with ground truth to prove the model's credibility

Zoo Management System

December 2021-May 2022

Built a Database Management System using MySQL

Website Development

December 2020-May 2021

Developed and designed a website from scratch about the Scheduling algorithms using HTML, CSS, and JavaScript

PUBLICATIONS

Automated Drowsiness Detection using Machine Intelligence Techniques (Link)

Automated Drowsiness Detection for Driver Safety: A Deep Learning-based Approach(Link)

IoT Technologies in Smart Environment: Security Issues and Future Enhancements (<u>Link</u>)

LEADERSHIP

Lead Editor for the Departmental Newsletter of Information and Communication Technology Event Organizer and Fundraiser to help Underprivileged Kids of rural area