Guruprasad Parasnis

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SUMMARY : Current Graduate student with hands-on experience in data science, machine learning, and statistical modeling. Seeking an internship or entry-level position to leverage analytical skills and contribute to impactful data-driven projects.

EDUCATION

University of California San Diego **La Jolla,CA,USA**
Master of Science in Data Science *Sept 2024 - Present*
Sardar Patel Institute of Technology **Mumbai,MH,India**
Bachelor of Technology in Electronics and Telecommunication (GPA : 3.93/4) *Aug 2020 - Jun 2024*

TECHNICAL SKILLS

Programming Languages: Data Structures in Python, Java, C++, SQL, OOP
Libraries: TensorFlow, PyTorch, Sklearn, Pandas, Numpy, OpenCV, MATLAB, Power BI, SQL Workbench, Oracle Live
Technologies: Machine Learning, Deep Learning, Optimization, Computer Vision, Signal Processing, NLP
Analytics: Linear Algebra, Calculus, Probability, Statistics, Data Mining, Feature Extraction, Data Visualization
Soft Skills: Teamwork, Leadership, Strategy

WORK EXPERIENCE

Indian Institute of Technology Bombay, India
Research Intern *Jan 2023 - Jun 2024*

- Pioneered a contactless fingerprint recognition system for the Government of India, collaborating with multiple technical and professional agencies for commericial usage, raising **$250,000 funds** for the project
- Implemented a mobile application by integrating **multiresolution wavelet layers** into deep learning architecture, resulting in a competitive Equal Error Rate of **2.5%**
- Developed an advanced network leveraging **shearlets and contourlets** for precise feature extraction, cutting down the number of epochs and loss by **33%**, enhancing overall model efficiency, with results in a journal paper under the mentorship of Dr. Vikram Gadre

Sardar Patel Institute of Technology, India
Undergraduate Student Researcher *Jun 2023 - Dec 2023*

- Devised and **patented** a high-accuracy **(96%)** pothole detection system using a **lightweight deep neural network**; research rigorously validated through dataset analysis and published in a IEEE conference
- Created a wavelet feature extraction method for **GANs**, achieving **18% faster convergence than standard methods**, validated on three datasets, and published as a paper.

AIDL Virtual Labs, India
Deep Learning Intern *Sept 2022 - Dec 2022*

- Engineered **logistic regression and XGBoost** predictive tools; achieved **92%** and **95%** accuracy respectively, improving early diagnosis of heart and cardiovascular diseases by **40%**
- Spearheaded the creation and implementation of deep learning models, such as **autoencoders and PoseNet**, on an interactive site, improving AI comprehension for **2,000+** monthly visitors

RESEARCH

PIXIE : A Novel Loss Function for Binary Semantic Segmentation
OpenCV, TensorFlow, Keras, Image Segmentation *Apr 2023 - Sept 2023*

- Invented an innovative **loss function** under Dr. Kailas Devadkar specifically for **image segmentation**, increasing model performance by **25%** and setting a new benchmark for image analysis
- Improved state-of-the-art model performance by **15%** through **model selection analysis**, with the groundbreaking results published in a reputed journal , advancing the field's understanding

Advanced Diagnostic Precision using Deep Learning for Diagnosis of CT scans
OpenCV, TensorFlow, PyTorch, Keras, Seaborn, SciPy *Aug 2023 - Dec 2023*

- Designed an efficient deep learning architecture under the guidance of Dr. Reena Sonkusare for improving performance on **two benchmark datasets in medical domain**, published in Springer with **Area Under Curve** > **98%**
- Enhanced algorithm efficiency by applying advanced **image pre-processing** techniques, resulting in a **43%** improvement in key performance metrics and boosting overall system responsiveness