

MADHU BABU SIKHA

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Education

University at Buffalo, The State University of New York <i>Master of Science in Data Science; CGPA: 4/4</i>	Sep. 2022 – Dec. 2023 Buffalo, New York
IIT Madras <i>Ph.D. in Communication Networks; CGPA: 8.75/10</i>	Jul. 2010 – Aug. 2015 Chennai, India
Narasaraopeta Engineering College <i>Bachelor of Technology in Electronics and Communication Engineering; %: 77.22/100</i>	Sep. 2003 – Apr. 2007 Guntur, India

Experience

Janssen Research & Development, LLC <i>R & D Data Sciences Intern – Medical Imaging with Deep Learning</i>	May 2023 – Aug. 2023 Titusville, New Jersey
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Technical Skills

- Programming Languages:** Python, MATLAB, R, MySQL
Python Libraries for Data Science: scikit-learn, NumPy, pandas, Matplotlib, Seaborn
Machine Learning / Data Science: Feature Engineering, Feature Selection, Exploratory Data Analysis (EDA), Supervised learning algorithms, Unsupervised learning algorithms
Tools: Microsoft Power BI, MS Office, VS Code, GitHub, Jupyter, LaTex

Relevant Coursework

- Machine Learning
- Statistical Learning
- Data Models and Query Language
- Programming and Database Fundamentals for Data Scientists
- Computer Vision and Image Processing

Data Science Projects

Melanoma Cancer Prediction <i>Python, Pandas, Seaborn, Tensorflow, Keras</i>	Nov. 2022 – Dec. 2022
• Trained EfficientNetB4 CNN with skin disease images and achieved a specificity of 99% and sensitivity of 98% on the validation set. This surpassed existing state-of-the-art methods in literature, as a result of efficient handling of data imbalance through stratified sampling and synthetic image generation using TensorFlow Keras.	

Breast Cancer Prediction <i>Python, Pandas, Seaborn, scikit-learn</i>	Nov. 2022
• Implemented various Classification algorithms on Wisconsin dataset, to predict the possibility of the cancer being benign or malignant and achieved an accuracy of 99%, an old Kaggle competition.	

Walmart Sales Prediction <i>Python, Pandas, Seaborn, scikit-learn</i>	Sep. 2022
• Implemented various Regression techniques like Linear Regression with Regularization, Decision Trees, Random Forests for the prediction of Walmart store sales, an old Kaggle competition.	

Academic Projects

TDM over PSN: Performance Analysis using Queueing Models with State-Dependent Service (Ph.D. Thesis)	Jul. 2008 – May 2009
• Proposed two algorithms for jitter control in TDM over PSN networks and minimized the variance in input packet stream by 78.5%. • Statistical analysis of the algorithms was performed in a multi-class traffic environment by modeling the scenario as a multi-queue scheduling system.	

Decision based Non-linear Filters for Impulse Noise Removal in Images	Sep. 2022
• Proposed an algorithm to efficiently remove salt and pepper noise up to a noise density of 90%, random valued impulse noise up to a noise density of 50%, and also a mixture of both.	

Academic Achievements

- Published 9 research articles in reputed IEEE and Springer journals and conferences.
- Ranked among Top 0.6% (All India rank: 1127, Total candidates appeared: 176,944) in GATE 2012.
- Member of a team of size 3 in the Microsoft's "AI for Earth Grant", which was sanctioned to our organisation.

Academic Experience/ Leadership

- Created impact on good number of students' career through teaching and motivating while working as a Faculty in Malla Reddy Engineering College, Hyderabad, India, from Aug 2015 to June 2022.
- Lead a team of around 250 faculty during NAAC accreditation process and achieved highest grade A++ (top 2.5% institutions out of 3000 institutions in India).