SIDDHI VISHWAS PANDARE

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EDUCATION

Master of Science, Electrical and Computer Engineering — Expected Spring 2024
Georgia Institute of Technology, Atlanta, Georgia. — ***CGPA: 4.0/4.0***
Relevant Coursework: Statistical Machine Learning, Human-in-the-loop Data Analytics, Advanced Programming Techniques

Bachelor of Technology, Electronics and Telecommunication Engineering — 2018 - 2022
Veermata Jijabai Technological Institute, Mumbai, India — ***CGPA: 9.54/10.0***

SKILLS

Programming Skills Python, C++, Matlab, LaTeX.
Libraries/Frameworks Numpy, OpenCV, Tensorflow, Keras, PyQt, Matplotlib.

EXPERIENCE

Graduate Research Assistant — Jan 2023 - Present
Janus Lab, Georgia Institute of Technology — *Atlanta, Georgia*

- Working on the application of Natural Language Processing to identify commonalities in the life stories of people for potential diagnosis.

Research Intern — May 2021 – August 2021
Rehabilitation Technologies Lab, University of Manitoba — *Winnipeg, Canada*

- Developed a platform for body language and posture recognition customized for patients with dementia using Python, OpenCV, Part Affinity Field and Confidence Maps based Machine Learning model, and Signal and Image Processing algorithms.
- Tested the platform by emulating real-world scenarios resulting in the accuracy of 92 % of the system.

AI Research and Development Intern — Jan 2017 - Jan 2019
AIRPIX AI — *Mumbai, India*

- Trained a dataset of 700+ images of Indian Vehicles on YOLO model for Automatic Number Plate Recognition.
- Built customized libraries for de-skewing of the image, border removal and background color detection based optimized binarization technique in Python to improve the accuracy of recognition.
- Implemented features such as multi-line license plate recognition using histogram-based image processing algorithm for character segmentation and post-processing algorithm on the output string using regular expressions and template matching resulting in an accuracy of approximately 94% and boosted the efficiency of the previous model by 5%.

PROJECTS

Using GANs for Indian Art Generation. Evaluated and compared the performance of DCGAN, LSGAN, GanGogh and CycleGAN on a curated dataset of Indian Art comprising 8 classes. [Report]

Smooth Operator: Step Towards a Generalized Smoothing Framework. Presented recommendations for developing a generalized framework for time series smoothing and evaluated the usage of different smoothing techniques based on properties of the data. Provided specific recommendations for time series with strong seasonality and other factors such as a number of outliers.[Paper]

Contactless Heart Rate Estimation System. Developed a platform for a non-contact heart rate estimation system for emergency situations such as COVID-19. Performed segmentation of ROI to compute heart rate information from the minute variation in color changes of the skin using Python and OpenCV achieving a mean error of 1bpm for various skin tone [Report]

EXTRA-CURRICULAR ACTIVITIES

- Completed Machine learning course from Stanford University, Python for Everybody Specialization from University of Michigan, on Coursera, 2020.
- Open-source contributor to AnitaB.org and published a blog under AnitaB.org Open Source titled 'Contributing using GitHub Web UI' which is a detailed guide to using GitHub for beginners in order to contribute to various Open-Source Projects, 2020.
- Recipient of 'Vasant Rao Nayak Scholarship' of INR 50,000 which is rewarded for high performing students from minority communities of India, 2018.