

ARUN GAONKAR

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EDUCATION

North Carolina State University

Master of Science, Computer Science (GPA: 3.89/4)

Relevant Coursework: Artificial Intelligence, Automated Learning and Data Analysis, Neural Networks, Design and Analysis of Algorithms, Software Engineering

Raleigh, North Carolina

(Anticipated) May 2023

PES University

Bachelors in Electronics and Communication Engineering (CGPA: 8.57/10)

Relevant Coursework: Data structures using C, Python Programming, Database Management and Systems, Machine Learning, Artificial Neural Networks, Digital Image Processing, VLSI Design, Signals and Systems, Logic Design

Bangalore, India

May 2020

SKILLS

- **Languages:** Python, C, R
- **Tools:** Keras, TensorFlow, PyTorch, Jupyter, Git, GitHub, MATLAB, Spark, MongoDB
- **Data Science:** Supervised/Unsupervised Learning, Visualization, Processing, Analysis, Model Training, Neural Networks, Deep Learning, Predictive Analysis
- **ML models:** RFC, DT, KNN, LSTM, RNN, CNN

PROJECTS

Wildfire Cause Prediction [Python, Colab, ML, Keras]

Sept 2021- Dec 2021

- Assessed 1.88 Million dataset and employed feature reduction after applying Data visualization to reduce under-fitting
- Performed predictive analysis with TensorFlow and Keras on models like RFC, KNN, LSTM and CNN to check for model complexity vs accuracy pattern
- Liaised with a team of 3 and obtained testing accuracy of 93%

Brain Tumor Image Classification [Python, Colab, DL, Keras]

Sept 2021- Dec 2021

- Designed and deployed trained CNN model for MRI Image classification
- Employed no-tumor class along with 3 other different types of tumors to increase scalability of application
- Collaborated with an amazing team of 3 for completion and achieved 92% prediction accuracy

Real-time Human Detection [Python, TensorFlow, Raspberry Pi]

Jan 2020- Jun 2020

- Implemented human detection in videos by operating on pre-trained model of TensorFlow
- Further trained the model SSD_v2_Quantized_COCO to increase the accuracy from 22 mAP to 24 mAP
- Interfaced the model with Raspberry Pi to increase the scalability in compact applications

Large Size Matrix Inversion using RNN [MATLAB, Neural Networks, RNN]

Sep 2019- Dec 2019

- Constructed matrix representation with op-amps for analog realization
- Reproduced research paper implementation with Hopfield Neural Network
- Reduced the computation complexity of matrix inversion from $O(n^3)$ to $O(n^{1.5})$

ACTIVITIES AND ACHIEVEMENTS

- Completed CITI certificate courses to conduct research at NCSU – CITI RCoR, CITI CoI, and HSR Basics.
- Participated in a semester long workshop on ‘Internet of Things – A wireless perspective’ conducted by NOKIA.
- Awarded Prof. CNR Rao merit scholarship for being in top 20% of the class in bachelors for 6 out of 8 semesters.