Ajay Krishna Raveendar

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Education

- **North Carolina State University** — Raleigh, USA
  Master of Computer Systems Networking and Telecommunications; ***GPA: TBA*** — *August 2022 - Present*
  Courses: *Automated Learning and Data Analysis, Design and Analysis of Algorithms, Internet Protocols*
- **PSG Institute of Technology and Applied Research (PSG iTech)** — Coimbatore, India
  Bachelor of Electrical and Electronics Engineering; ***GPA: 8.78/10*** — *August 2018 - June 2022*
  Courses: *Object Oriented Programming, Database Management Systems, Data Structures*

Technical Skills

- **Languages:** Python, C, Java, MATLAB, SQL, Bash, Linux Shell
- **Web:** HTML, CSS, JavaScript
- **Tools:** IntelliJ IDEA, Codeblocks, MySQL, Jupyter, Arduino IDE, Visual Studio Code, Git, AWS, JIRA
- **Libraries:** NumPy, Pandas, SciPy, Scikit-Learn, OpenCV, TensorFlow, Keras, Matplotlib

Work Experience

- **Soliton Technologies Pvt Ltd** — Coimbatore, India
  Intern - Data Science — *November 2021 - March 2022*
  - Understood the demands of the customer, NXP Semiconductors based on their analysis of our pre-existing machine learning model that evaluates waveforms and spots anomalous ones.
  - Devised an automatic waveform generator to replicate the results of the analysis done by the customer. Deciphered the reason for the lag in the performance of our model from the results.
  - Optimized the model by implementing a dynamic kNN algorithm. Packaged and dispatched the refurbished machine learning model to the customer.
  - Explored Amazon Web Services(AWS). Hands on experience with S3, EC2, Lambda.

Academic Projects

- **Myers-Briggs Personality Detection System** — **September 2022 - Present**
  Identifying the personality of the subject based on their last fifty social media activities. The implementation will deal with data preprocessing and applying classification techniques.
- **Speech Emotion Recognition** — **June 2022**
  Applied machine learning techniques to classify speech signals based on the emotions embedded in them. Cleaned the dataset, extracted the necessary features and employed CNN, SVM, ELM and Random Forest algorithms for prediction. The Random Forest algorithm produced the maximum accuracy of 71%.
  Dataset: RAVDESS, TESS, SAVEE, CREMA-D **Libraries:** Tensorflow, Pandas, Scikit-Learn, Librosa
- **Disease Detection in Banana Leaf using CNN** — **February 2022**
  An automated system has been developed to classify the leaf spot of crops based on the morphological changes that are caused by the pathogens using image processing and deep learning. An accuracy of 88% was achieved. Currently, working on implementing a latest algorithm, Vision Tranformer to improve accuracy.
  Dataset: Banana Leaf Dataset on Kaggle **Libraries:** Tensorflow(Keras) **Hardware:** GPU
- **Implementation of Neural Network based Controller for DC-DC Buck Converter** — **May 2021**
  The stability of the output from the power electronic device is highly improved using Neural Network based controller. This controller is highly efficient, adaptable, and easy to design.
  Language: MATLAB
- **Fitness Tracker** — **September 2019**
  In this project, steps are counted, heart rate and calorie burn are tracked, and information is sent to the user via an app.
  Software: Arduino IDE **Modules:** ADXL345, XD-58C, HC-05

Courses and Certifications

- Python for Data Science and Machine Learning Bootcamp
- C Programming for Beginners-Master the C Language
- Java Programming and Masterclass
- IoT and Sensors