

EDUCATION

- **CentraleSupélec** Paris, France
Master of Science in Artificial Intelligence Sep. 2019 – Present
 - **Key Courses:** Machine Learning, Deep Learning, Optimization, Computer Vision, Big Data, Reinforcement Learning, Natural Language Processing
- **Indian Institute of Information Technology Design and Manufacturing** Chennai, India
Bachelor of Technology in Electronics and Communication Engineering; GPA: 8.37/10 Jul. 2015 – May 2019
 - **Key Courses:** Digital Signal Processing, Linear Algebra, Digital Image Processing, Data Structures and Algorithms, Discrete Mathematics, Graph Theory

RESEARCH EXPERIENCE

- **INSERM** Grenoble, France
Artificial Intelligence Research Intern May 2020 - Oct 2020
 - Worked on the development of an unsupervised Spiking Neural Network (**SNN**) with Spike-Timing Dependent Plasticity (**STDP**) for automatic classification of animal vocalizations.
 - Encoded raw analog audio into discrete spike trains with 'time-to-first-spike' encoding.
 - Implemented a Low-Threshold-Spiking (**LTS**) Neuron model to mimic the activity of biological neurons by introducing a temporal dimension to the activation of neurons.
 - Implemented the **STDP** learning rule to enhance learning by updating the synaptic weights of the network.
- **INSERM** Grenoble, France
Research Intern May 2018 - Oct. 2018
 - Analyzed minipig vocalization data and attempted to cluster them in order to facilitate mapping with cortical activity; critical for the development of a Brain-Computer Interface (BCI).
 - Coded functions to successfully implement clustering algorithms like PCA and t-SNE using MATLAB.
 - **Techniques Used:** Spectrogram Analysis, **Principal Component Analysis**, **t-SNE**

PROJECTS

- **Aspect-Based Sentiment Analysis**
 - Implemented a classifier using a dense Neural Network with **dropout** to predict aspect-based polarities of opinions in sentences (**positive, negative and neutral**) and achieved an accuracy of **0.85**.
 - **Techniques Used:** transformers (**BERT**), lemmatization, POS tagging
- **Pedestrian Bounding Box Detection**
 - Used classical Computer Vision methods to detect pedestrians from 684 different frames of a video.
 - **Techniques Used:** Gaussian Smoothing, Canny Edge Detection, Background Subtraction, Dilation, Opening and Contour Detection
- **Eat Cheese - Deep Reinforcement Learning**
 - Built an agent that maximizes the amount of cheese it collects on a 10x10 grid in a give period of time.
 - Compared the performances of two algorithms - one implemented with a fully connected network and another with a Convolutional Neural Network (CNN).
 - **Techniques Used:** Deep Q-Networks (**DQN**), Convolutional Neural Networks (**CNN**)

PROGRAMMING SKILLS

- **Languages:** Python, C, C++, MATLAB
- **Technologies:** AWS, Hadoop, Spark
- **Libraries:** numpy, scipy, spacy, NLTK, scikit-learn, pandas, PyTorch, TensorFlow, Keras, PySpark

LANGUAGES

- English - Bilingual Proficiency (TOEFL iBT 104/120)
- French - Intermediate Proficiency (A2 CEFR)
- Telugu - Native Language
- Hindi - Bilingual Proficiency

ACADEMIC ACHIEVEMENTS

- Secured 976/1000 and was among the 'top 1 percent' of the Andhra Pradesh Board Examination 2015 in India. Was offered a science scholarship by the Board of Intermediate Education, AP.
- Was among the 'top 2 percent' of the 1.4 million students who took the prestigious and highly competitive JEE Main exam (2015) in India.