



Los Angeles, United States



## EDUCATION

### University of Southern California, *Master's - Electrical and Computer Engineering*

Relevant Coursework - Probability, Linear Algebra, Deep Learning, Machine Learning (Statistical methods, Supervised, Unsupervised, Semi-Supervised, and Transfer Learning), Cloud and Distributed Computing, Convex Optimization  
GPA: 3.5/4.0

August 2021 – May 2023  
Los Angeles, United States

### PES University, *Bachelor's - Electronics and Communication Engineering*

Minor: Computer Science Engineering  
Relevant Coursework - Digital Signal Processing, Artificial Neural Networks, Machine Learning, Speech Processing, Generic Programming, Algorithms, Data Structures, Databases, Operating Systems, Engineering Mathematics 1-4  
GPA: 3.55/4.0

August 2016 – August 2020  
Bangalore, India

## PROFESSIONAL EXPERIENCE

### Intern, *SproutsAI*

- Developed a solution using natural language processing to assist hiring managers in better filtering candidates for technical roles using audio inputs.
  - Programmed sentence encoders in an augmented space and used several different similarity measures to accomplish rule-based question branching.
  - Led a team of 5 interns to develop a minimum viable product.
- Technologies used: Transformers, Python, AWS, Jira, Github, Huggingface.*

June 2022 – August 2022  
Sunnyvale, United States

### Consultant, *Deloitte*

- Conducted compliance reviews to ensure that clients were meeting regulatory and legal requirements.
  - Piloted over 20 internal control assessments for clients across various industries, resulting in a 30% reduction in control deficiencies for clients.
  - Utilized tools and technologies such as Microsoft Excel, Access, and SQL to analyze and interpret data.
- Technologies used: Microsoft Excel, Access, SQL, PowerBI, SAP, SAP HANA.*

October 2020 – May 2021  
Bangalore, India

### Intern, *Nokia*

- Developed a testing automation framework, as a team of 2, using image processing techniques and the TensorFlow Object Detection API. Utilized transfer learning to fine-tune an existing object detection model on a dataset of over 1200 test images, resulting in an accuracy of 95%
  - Conducted extensive evaluation of model's performance on variety of real-world test scenarios, resulting in 80% detection rate and 70% recall rate for detecting anomalies in the test images.
- Technologies used: Python, Tensorflow, Computer Vision (OpenCV)*

June 2019 – December 2019  
Bangalore, India

## PROJECTS

### Explainability in Flight Delay Prediction

- Implemented a flight delay prediction model using machine learning techniques such as logistic regression, decision trees, and random forests achieving a final accuracy of 92% and reducing the number of false positives by 35%.
- Conducted feature engineering and evaluated performance of model using metrics such as accuracy, precision, recall, and F1 score. Improved model interpretability by using techniques such as feature importance, decision trees, and partial dependence plots, resulting in a 50% increase in understanding of the model's predictions.
- Analysed sensitivity to identify most important features for model predictions. Used techniques such as gradient boosting and ensemble learning resulting in a 20% increase in accuracy while maintaining its interpretability.

### Predicting Student Performance

- Interpreted real-world factors, such as student grades, demographic, social, and school-related features, influence on students' performance.
  - Modeled performance in Portuguese language as a five-class classification task using K-Nearest Neighbors, Logistic Regression, Kernel Support Vector Machines, and Multi-Layer Perceptron. Determined that non-academic features had an insignificant influence on students' performance.
- Technologies used: pandas, sklearn, NumPy, Matplotlib, Seaborn*

### MERN Social Media Application

- Designed and developed a social media app using MERN stack. Implemented user authentication and authorization using JWT (JSON Web Token) and bcrypt for secure password storage.
  - Built a RESTful API using Node.js and Express for handling CRUD (Create, Read, Update, Delete) operations for posts, comments, and user profiles.
  - Integrated AWS S3 to store user-generated content, resulting in a 30% decrease in load time for images and videos.
- Technologies used: Node.js, MongoDB, React, Express, AWS*

### Neural Style Transfer using Cycle Consistent GAN

- Designed a neural style transfer system using CycleGAN using PyTorch with accuracy of 90% on a dataset of 10,000 images.
  - Preprocessed dataset by applying data augmentation techniques to increase diversity of training data.
  - Fine-tuned model by adjusting hyperparameters such as learning rate, number of epochs, and batch size to optimize model's performance. Evaluated the performance of the model by measuring metrics such as the Mean Squared Error (MSE) and L1 loss.
- Technologies used: Python, Pytorch, Matplotlib, Numpy, Github.*

## SKILLS

**Programming Languages** (Python, C, C++, Node.js, PostgreSQL, MongoDB, Matlab and Verilog),

**Python Libraries** (Matplotlib, Plotly, Pandas, Scikit Learn, Transformers, PyTorch, Tensorflow, Numpy, Qiskit, Gensim, Scipy, Jupyter Notebooks and Keras),

**Platforms and Softwares** (AWS(Amazon S3, EC2), Jira, Docker, Mentor Graphics – Pyxis Schematic and Xilinx – Vivado)

## LEADERSHIP AND INVOLVEMENT

### University of Southern California

- **Teaching Assistant** for two summer coding/engineering programs using Arduino organized by Viterbi K-12 STEM Center for High School students.
- Designed courses in robotics and machine learning for middle school and high school students for CS@SC Summer Camps.