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EXPERIENCE

Graduate Research Assistant **CREOL, University of Central Florida, FL** **May 2017 – Present**

- Automated the tapering and splicing process by developing software in Python
- Reduced overhead time by 40% over the time required to achieve the process manually
- Developed and delivered training modules in Python
- Developed generative models (convolutional autoencoders) in Python and Keras (TensorFlow) to restore the quality of image in image transmission experiments; optimized for cross-entropy loss of 1.1 in the quality of images

Visiting Research Assistant **Nokia Bell Labs, NJ** **June 2017 – July 2017**

- Assisted Dr. Nicolas Fontaine in calibration of LCoS-SLM using Python
- Created deep learning models using Python and Keras (TensorFlow) to improve the quality of mammograms and dental X-rays; Accepted and recognized by Dr. Nicolas Fontaine
- Delivered talk on 'Overview of Machine Learning' at Holmdel location

Graduate Research Assistant **CRCV, University of Central Florida, FL** **Sept. 2016 – Nov. 2016**

- Assisted in training a dataset of 15000 images in Python and MATLAB to create a system of automatic image annotation

EDUCATION

Orlando, FL **University of Central Florida** **Fall 2016 – May 2018**

- Master of Science in Computer Engineering, May 2018 (Expected)
- Relevant Coursework: Data Mining Methodology, Independent Study, Computer Vision, Random Processes
- MOOC: Machine Learning (Coursera), Machine Learning A-Z (Udemy), Data Science A-Z (Udemy), Scala and Spark for Big Data and Machine Learning

India **National Institute of Technology, Warangal** **July 2012 – May 2016**

- Bachelor of Technology in Electronics and Communication Engineering

PROJECTS

- **Cryptocurrency Price Prediction** (2017). Created machine learning models to forecast the price of cryptocurrencies like Bitcoin, Ethereum; Achieved comparable performance in ARIMA and Facebook Prophet models (R^2 score of 0.98)
- **Orlando Crime Classification** (2017). Created interactive dashboard in Python notebook using Tableau for visualizing crime patterns using 6 years of Orlando crime data; Identified class of crimes using naïve Bayes machine learning algorithm; Obtained multi-class log loss of 1.55
- **Dynamic Toll Pricing** (2017). Visualized Orlando traffic trends using MicroStrategy software; proposed variable toll prices to achieve traffic load-balancing, proper utilization of infrastructure; Secured 5th place in Orlando Smart City Hackathon
- **House Price Prediction** (2016). Conducted exploratory data analysis (EDA) on the dataset and employed ensemble Lasso regularization and XGBoost to predict house prices using Python; Achieved RMSE of 0.015; Secured rank 142 out of 2249 (top 7%) on the Kaggle leaderboard
- **Bike Sharing Demand** (2017). Predicted the demand on bikes with RMSLE of 0.1 by performing EDA and employing regression model; Used Ridge regularization and performed grid search hyper-parameter tuning
- **Forward Collision Warning (FCW) using Machine Learning** (2017). Designed a system using decision trees to generate alerts for cars within warning range; Achieved F1-score of 0.95 on the dataset of 800 different scenarios (~370K examples); Improved the performance by 15% over the traditional CAMP Linear algorithm

SKILLS

Programming Languages: Python, MATLAB, R
Data Visualization: Tableau, MicroStrategy
Machine Learning Software: Gretl, SAS
Machine Learning Libraries: TensorFlow, Keras, Scikit learn (NumPy, Pandas, Matplotlib)