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EXPERIENCE

Graduate Research Assistant   **CREOL, University of Central Florida, FL**   **May 2017 – Present**
- Developed and deployed GUI based software for splicing machine used in research of nonlinear and quantum optics, fiber optics
- Designed and added functionality to the LZM-100 splicing machine over the existing software by integrating the DLL in Python
- Reduced manual workload by 60-90 minutes daily
- Automated the process of splicing multi-mode fibers

Visiting Research Assistant   **Nokia Bell Labs, NJ**   **June 2017 – July 2017**
- Assisted Dr. Nicolas Fontaine in calibration of LCoS-SLM using Python
- Developed convolutional auto-encoder in Python and Keras (TensorFlow) to restore the quality of image transfer realized using LCoS-SLM; optimized for 1.1% loss in quality of images
- 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) – 4.0/4.0 GPA
- 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)

PROJECTS

- **Kaggle Titanic Survival Prediction** (2017). Performed exploratory data analysis (EDA) to get intuition on the survival rate of different groups; Used Python for visualization
- **Kaggle House Price Prediction** (2017). Conducted 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 leaderboard
- **Kaggle 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)
- **Smart Toll Pricing** (2017). Created a model to forecast variable toll prices to balance traffic load by using MicroStrategy and Python; Used Orlando traffic data

SKILLS

- Python, MATLAB, R, C++, MySQL
- Tableau, MicroStrategy, Gretl, SAS
- TensorFlow, Keras, Scikit learn, NumPy, Pandas, Matplotlib