Saurabh Kulkarni

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Objective

Looking for full-time opportunities to work on Machine Learning and Data Analysis Projects

Education

Masters | March 2017 (Expected) | UC San Diego

Major: ECE (Specialization: Intelligent Systems)
Certificate: Micro-MBA, Rady School of Management, UCSD, July 2016

Bachelors | August 2015 | BITS Pilani University, India

Major: Electrical and Electronics Engineering

Useful Skills

Relevant Courses: Statistical Learning, Data Analysis using R, AI using graphical models, Computational Modeling in Cognition, Parameter Estimation (ongoing), Data Mining using Spark (ongoing), Signal Processing

Programming/ Tools: Python, R, MATLAB, Tableau, MySQL, PySpark (beginner)
Statistics and ML Techniques like multivariate regression, supervised classification using tree-based ensembling like random forests, boosting, kernel based methods like SVM, Bayesian generative models and unsupervised methods like clustering.

Professional Experience

Graduate Intern | IgrenEnergi, Inc. | Aug 2016 – Dec 2016

- Key Responsibilities: Develop prediction models to forecast PV array output using weather data, irradiance data and PV panel characteristics. Evaluate models for actual data collected on the pilot site.
- Develop a data-driven diagnostic backend to identify system faults based on input power and weather data.
- Other responsibilities included: Product demo of IoT based PV power optimizer and pitching to potential investors

Undergraduate Intern | Intel | July 2014 – Dec 2014

- Developed a sensor-fusion based g-force evaluation and inertial navigation system.
- Implemented a pilot system on a Raspberry Pi platform using **Python** and Numpy, Scipy modules

Recent Projects

Predictive Modelling for Insurance Claim Approvals (Kaggle based competition)

Mar 2016 | UCSD

- Objective was implement a **R based** robust rare class classification model to accelerate claims management processes of BNP Paribas Cardif. Visualization of data was performed to identify significant variables post data-imputation.
- Evaluated the performance of random forest and xgboost with respect to the base case of logistic regression. Class probabilities were calculated of the test set and log-loss error metric was used to compare results.

Handwritten Digit Classification

Apr 2016 | UCSD

- Multivariate Gaussian generative model was used to classify images of handwritten digits of MNIST dataset and the results were compared with the base case of logistic regression. **Tools:** Python with scipy, sklearn and seaborn packages

Effects of Lexical Characteristics on Recognition Memory

June 2016 | UCSD

- Built linear regression and mixed effects based, cognitive models to evaluate memory performance of bilinguals and monolinguals based on different lexical (word) characteristics, using **R**
- **Tools**: R and its packages (like ggplot2) for visualization

Voice Command Recognition Using Filtering

June 2016 | UCSD

- Built a **MATLAB** based voice command recognition system using adaptive LMS filtering and template matching.
- Mel-frequency Cepstral components along with DTW were used as features during classification