SAURABH KULKARNI

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Objective Looking for full time opportunities to work in Machine Learning and Data Science.

Education

University of California San Diego,
- MS Intelligent System: GPA: 3.41/4.0
- Rady's School Certificate: Micro MBA

Birla Institute of Technology and Sciences,Pilani,
- B.E. Electrical and Electronics Engineering: CGPA 8.35/10.00

Work Experience

Graduate Intern, IgrenEnergi, Inc August 2016 - Present
- Key Responsibilities: Develop power output forecasting techniques for PV array using shadow effects 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 igrenEnergis Power Electronic device faults based on input power and weather data. **Tools: Python and C++**

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

Relevant Skills

Languages and Tools: Python, R, MySQL, C++, MATLAB, Tableau, Hue, PySpark
Machine Learning: Adaptive filtering techniques, multivariate regression, supervised and unsupervised classification, tree-based ensembling, boosting, Bayesian generative models
Relevant Courses: Statistical Learning, Data Analysis using R, AI using graphical models, Computational Modeling in Cognition, Digital Signal Processing, Parameter Estimation (ongoing), Computer Vision (ongoing), Data Mining using Spark (ongoing)

Projects

Predictive Modelling for Insurance Claim Approvals March 2016
- Implemented a **R-based** robust rare class classification model to accelerate claims management processes of BNP Paribas Cardif.
- Significant variables were identified and the classification performance of random forest and xgboost with respect to the base case of logistic regression.

Handwritten Digit Classification Apr 2016
- 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
- Built linear regression and mixed effects based, cognitive models to evaluate memory performance of bilinguals and monolinguals based on different lexical (word) characteristics
- **Tools:** R and its packages (like ggplot2) for visualization

Voice Command Recognition Using Adaptive Filtering June 2016
- 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