Claire Asselstine

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EDUCATION

UC BERKELEY
Computer Science and Applied Mathematics
Expected Dec 2016 | Berkeley, CA
GPA: 3.7

LINKS

LinkedIn:// **classelstine**
Website:// **classelstine.com**

COURSEWORK

COMPUTER SCIENCE
Algorithms (Graduate and Undergrad)
Machine Learning
Artificial Intelligence
Data Structures
Machine Structures
Database Systems
Computer Graphics

MATHEMATICS
Multi-variable Calculus
Linear Algebra
Discrete Mathematics
Abstract Algebra
Real Analysis
Numerical Analysis
Complex Analysis

SKILLS

PROGRAMMING
Java• C• Python• R• MATLAB• SQL• Hive• HBase• LaTeX • Unix• Vim

EXTRA CURRICULAR

2013-2016 Improv4Charity
2013-2014 Vagina Monologues
2012-2013 Cal Women's Rugby
2008-2012 Marin Search & Rescue

EXPERIENCE

QUALCOMM INC. | Network Analytics Intern
June 2016 – Sep 2016 | San Diego, CA

- Applied Machine Learning and Network Graph Analysis to enhance existing analytics work. Developed a graph based method for modeling telecom network data to support network analytics.
- This included device profiling, cell tower clustering, and the creation of a total network profile. This new approach supports comparative analysis, outage and fraud detection, and event site recognition through mobility patterns.

IFWE | Data Analytics Intern
May 2015 – Aug 2015 | San Francisco, CA

- Worked on the Big Data team at a social networking company based in San Francisco. Developed functions for Hive to more efficiently manipulate large tables stored in HBase.
- Analyzed a probabilistic data structure to increase accuracy of Daily Active User counts from 95% to 99%.

RESEARCH

UC BERKELEY A.I. | Undergrad Researcher
Dec 2014 – May 2015 | Berkeley, CA

Worked under Prof. Stuart Russell and built Monte Carlo Markov Models to more accurately model the intracranial pressure of patients of traumatic head injuries in the ICU. The goal is to significantly decrease the number of false alarms for dangerous readings to better treat patients.

PROJECTS

RANDOM FORESTS & DECISION TREES
Developed a machine learning program which implements decision trees and random forest algorithms to predict unknown labels for current housing data from the 2015 Census. Added implementations of Bagging, Pruning, and AdaBoost.

SPAM CLASSIFICATION
Implemented a support vector machine, ridge regression, logistic regression, linear discriminant analysis, and quadratic discriminant analysis classifiers (separately) to tackle the problem of detecting spam messages. All functions and algorithms uses were completely written from scratch.

DIGIT CLASSIFICATION
Implemented a single layered neural network to create a digit classifier. Using both stochastic and batch gradient descent, the training error decreased 1%, and the testing error was 3%.

LATENT SEMANTIC INDEXING
Conducted a survey of Latent Semantic Indexing (LSI) for a Graduate course on Algorithms. LSI uses Singular Value Decomposition to take a set of text documents and rank, categorize, and cluster them. The result is a motivation for the idea of "relevance" between documents.