

Yu 'Zoey' Zhuang

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Education

University of Washington Tacoma, WA
Master Science in Computer Science and System
09/2016 – 06/2018(Expected)
GPA: 4.0/4.0

Xi'an Jiaotong University Xi'an, CHINA
Bachelor Science in Computer Science
09/2012 – 06/2016
GPA: 3.6/4.0

Work Experiences

IBM, Beijing, China

06/2015-07/2015

Software Engineer Intern for IOS

- Researched for common functions of Human Resource Information System. Wrote demos to communicate and interact with costumers, and documented the details of costumers' requirements;
- Wrote overall layouts and displayed personal information using Swift;
- Modified and optimized existing functional module code using Swift.

Project Experiences

Domain-Based Feature Selection, AGD Detection and AGD Family Classification 05/2017-11/2017

- Goal & Context: Aimed to conduct various data analysis techniques and feature selection methods to obtain the best feature set for distinguishing benign domains from malicious domains which are Algorithmically Generated Domains (AGDs), then classify the AGD families with and without features.
- Researched for and then extracted all available linguistic features of domains, and done feature analysis such as linear correlation, multicollinearity, feature frequency distribution per class, and so on;
- Leveraged feature selection techniques including wrapper and filter methods to obtain the best feature set;
- Optimized the performance (TPR@FPR 0.001) of distinguishing AGDs by 10%, using Random Forest;
- Optimized the accuracy of AGD family classification by 15%, using CNN approach without features.

Predicting Gender and Age of Authorship over Text from Facebook

10/2016-01/2017

- Goal & Context: Leveraged users' texts, text analysis techniques and machine learning algorithms, to conduct the binary and 4-class classification separately for gender and age of authorship based on text.
- Programming Language & Packages: Python, NLTK, Scikit-Learn.
- Conducted text tokenization, word normalization and stemming, and sentence segmentation; obtained term frequency-inverse document frequency;
- Built SGD Classifier for gender and OneVSRest Classifier for age with high performance(Accuracy).

Predicting Defects of Software Changes Based on Network Analysis

10/2015-05/2016

- Goal & Context: To improve the performance to predict the defects of software, the idea is to add a new category of feature, the network-attribute feature, into the existing feature set. The nodes and edges are separately corresponding to java source files in software and dependency relationships among files.
- Programming Language & Other Tools: Java, Linux, Weka, Understand, UCINET.
- Extracted five classes of network-attribute features such as closeness measure, reach centrality and so on;
- Data integration and feature selection using recursive feature elimination to obtain the best feature set;
- Developed a Naïve Bayes Classifier on the best feature set, improving the performance (Accuracy) by 9%.

Computer Skills

- **Programming Language:** Java, Python, R, C++, Swift, MATLAB, VHDL, CSS3, HTML5, JavaScript;
- **Computer Fundamental:** Data Structure, Algorithm Design and Analysis;
- **Others:** Software Engineering, Machine Learning, Data Analysis, NLP, MySQL, Linux.