Jiri Gesi

Machine Learning Engineer
Information Technology and Operation
Ford Motor Company

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Research Interests

My research interest lies in software quality detection, software automation refactoring, Software Optimization. For other areas of interested include: programming language and machine learning.

Education

December 2017 — **University of Michigan-Dearborn**, USA
M.S. Software Engineering
GPA: 3.7/4.0
Thesis: "Personal Web services Interface Design Using Interactive Computational Search "

May 2016 — **Xi'an Jiao Tong University**, China
B.S. Mechanical Engineering
GPA: 82/100

Research Experience

August 2016 - December 2017
University of Michigan-Dearborn
Principal Investigator: Marouane. Kessentini, Ph.D
Search Based Software Engineering Lab, USA
I was working on software refactoring and optimization, through implementing Genetic Algorithms and Machine Leaning Algorithms.

September 2014 - August 2015
National Chiao Tong University
Cloud Service and Software Engineering Lab, Taiwan

Teaching Experience

Jan 2017 – Dec 2017 | CIS 285 Software Engineering Tools
- Tommy. Xu, PHD
I was responsible for the whole semester lab individually. I prepared the lab projects to let students understand the benefits of the tools. I also mentored the students for their course projects. Because of the good feedback from the students, I was hired to teach this lab for the next semester.

Summer 2017 | CIS 350 Data Structure and Algorithm Analysis, UM - Dearborn
- Bruce. Elenbogen, PHD
Designed the projects with Professor for the course. The projects were totally new so that students had nowhere to copy. I Mentored students to finish their projects. I also Graded their exams and weekly quiz.

Research Projects

Sep 2016 – May 2017

Personal Web services Interface Design Using Interactive Computational Search

- Marouane. Kessentini, Ph.D

Proposed a remodularization recommendation approach that dynamically adapts and interactively suggests a possible modularization of the Web services interface design to users and take their feedback into consideration. We evaluated on a set of 22 real world Web Services provided by Amazon and Yahoo. Statistical analysis of our experiments shows that this modularization approach performed better than state-of-the-art modularization techniques.

June 2017 – Dec. 2017

Improving Web Services Design Quality Using Heuristic Search and Machine Learning

- Marouane. Kessentini, Ph.D

Proposed an automated approach to generate Web service defect detection rules that consider not only the code/interface level metrics but also the quality of service attributes. Through multi-objective optimization, the proposed approach generates solutions (detection rules) that maximize the coverage of antipattern examples and minimize the coverage of well-designed service examples. An empirical validation is performed with eight different common types of Web design defects to evaluate our approach. We compared our results with three other state-of-the-art techniques which are not using Quality of Services metrics. The statistical analysis of the obtained results confirm that our approach outperforms other techniques and generates detection rules that are more meaningful from the services' user perspective.

Working Experience

Current – Jan 2018

Machine Learning Engineer at Ford Motor Company

- Information and Technology Operation Department

The job responsibility is to use the users generated history data to find the daily, weekly and yearly dataset trends through training machine learning model and tease out multiple dataset correlations and trends. I created machine learning applications to help monitoring team capable to look at all data instead of only outliers. I used the applications to look at data that's could come to a conclusion, which can help with predictive analysis. I also trained machine learning models to predict the fault at a defined point of time. Furthermore, My another achievement is that I optimized the specific monitoring metrics and thresholds, which helped the team improve eighty percents alert precision and thirty percents alert recalls.

Programming Skills

Proficient: JAVA, Python, mySql

Experienced: C++, Matlab, JavaScript, PHP,HTML, CSS

Scholarships

Sept. 2015 SiYuan Scholarship by Xi'an Jiao Tong University

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Sept. 2013 SiYuan Scholarship by Xi'an Jiao Tong University

June 2013 GCP Scholarship by Hong Kong University of Science and Technology