Shiqian Jesse XU

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EDUCATION

North Carolina State University (NCSU)	**Raleigh, NC**
M.S. in Computer Science, Overall GPA: 4.0/4.0	*Aug. 2014 – May. 2016*
Shanghai Jiao Tong University (SJTU)	**Shanghai, China**
B.S. in Electrical Engineering, Overall GPA: 3.5/4.0	*Sept. 2010 – Jul. 2014*

KEY SKILLS

Computer Languages	Java, Go, Python, Ruby, Javascript, C++, C#
Database & Cache	MySQL, SQLite, Redis, MongoDB
Other tools	Jenkins, Docker, JUnit, Hadoop, SpringMVC, GitHub, Maven,
Professional Skills	Fluent in Chinese, Interpretation Skills, Leadership, Volunteering

INTERN EXPERIENCE

IBM Corporations *May 2015 – Present*
Intern, IBM Bluemix Container Services (Go,Docker,Python,Jenkins,Node.js)
- Developed a new Command Line Interface(CLI) in Go for IBM Container Services through REST API, Cloud Foundry and Docker CLI, with automated Jenkins tests to check compatibility with server API and status.
- Modified API server to better support multiple versions of CLI and added more utility features such as wildcard matching and inspecting details for container images, etc.
- Improved and generalized Jenkins test to support CLI tests and decoupled projects to lightweight Jenkins job.
- Developed Python script to fetch build stats every 30 minutes from Jenkins, stored the data into MySQL and visualize it in Dashboard using Node.js with Chart.js and Express.js.

ACADEMIC PROJECT

Privacy Incidents Database (Python, Java)
- Designed a system which is able to distinguish privacy incidents among random news.
- Used NLTK and SpaCy NLP library to process the plain text and calculated the tfidf value for training.
- Run cross-validation and training in Weka and Scikit-py to get the predicated the value for the newly added news.

Continuous Integration pipeline and Continuous Delivery solutions (Docker, Jenkins, Node.js)
- Designed CI pipeline and CD to Canary and Production Server using Docker and proxy server.
- Deployed Jenkins build server on Amazon EC2 to run continuous test on every Github push and timely.
- Ran Behavior Driven Test and Static Analysis Tool on Git hook to accept or deny a commit.
- Added Code Review into the pipeline whose review request will be auto-generated after successful builds.

Performance comparisons on SQL and NoSQL Database (Java, MySQL, MongoDB)
- Built up test environment for two databases using Spring framework and set up different DAO layers.
- Wrote insertion, query and deletion test cases on different DBs to test single thread and multi threads performance.
- Tested and compared on data integration results with join table in SQL and nested structures in NoSQL.

Refactoring grades_controller Class in Expertiza (Ruby on Rails, OSS)
- Refactored methods on query of database in grades_controller.rb and improved the system performance up to 98%.
- Reduced the complexity of several methods by removing unnecessary instance variables and loops inside.
- Fixed bugs via REST principle and expedited page load speed by 15 times in Open Source Project.
- Improved Mailing feature for instructors and adjusted data loading pattern when rendering new web pages.

RESEARCH EXPERIENCE

Handover Technologies among Heterogeneous Networks on Smartphone *Oct. 2012 – Jul.2014*
Research Assistant, Institute of Wireless Communication of SJTU *(Android, MATLAB)*
- Put forward a new Multiple Attribute Decision Making algorithm on vertical handover among heterogeneous networks based on QoS, Time Delay, Download Speed, Optimum Load Balance, User Moving Pattern and Neutral Network to optimize the customer experience.
- Demonstrated and compared simulation results with existing algorithm in MATLAB.
- Wrote software demos in Java and tested on Android platforms.

PATENTS& CERTIFICATE

- "**Vertical handover decision algorithms based on Load Balance and Multiple QoS Parameters**", Inventors: **Shiqian Xu**, Guoqing Yao, etc., Chinese Patent, CN103648129A, Issued Date: Mar. 19, 2014.