Zixiang Zach Zhou

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EDUCATION

B.S. Computer Science	May 2015
B.S. Mathematics	May 2015

University of Arizona - Tucson, AZ
Cumulative: GPA 3.55, Academic Distinction for 2012-2013

COURSEWORK & SELF-TAUGHT SKILL

Completed several group projects and developed efficient, reliable, maintainable, and evolvable software for large software projects

- **Languages**: Java, C, C#, Python, HTML, CSS, JavaScript/Jquery, PHP, MIPS, Bash, R
- **Tools**: Visual Studio, SQL Server Management studio, Entity Framework, Telerik, RedGate, Eclipse, **Git**, LaTeX
- **Operating System**: Mac, Ubuntu/Linux, Microsoft
- **Web**: ASP. NET, Angular JS, JSP, Bootsrap, Zurb, Kendo UI , JDBC, SQL server, Oracle, MySQL, PostgreSQL
- **Concepts**:Software Engineering, Object Oriented Design, Operating System, Database Design, Data Structures, Algorithms, Linear Algebra, Computer Networks, Cryptography, Machine Learning, Statistics

EXPERIENCE

Web Application Developer, University of Arizona   June, 2014 - Present

- Develop and maintain all 6 interfaces of 'Scholarship Universe', a scholarship matching and awarding tool for the university with 35000+ active users.
  - Follow user-centered design and agile software development with ASP .NET MVC / Web Forms
  - Analyze student application patterns and provide proposals to improve efficacy
  - Develop applicant reviewing platforms to meet departments' requirement
- Manage and analyze scholarship and student information datasets with SQL Server and related tools
  - Transform database schemas into ER model to keep data consistency and reduce redundancy
  - Compare and backup data / schemas by using Redgate SQL Tools

PROJECTS

- Write and simulate basic parts of an operating system in a virtual environment to learn system's principles
  - Support multi-processes handling (fork, kill, join, and synchronizations) and efficient scheduling
  - Build clock, disk and terminal drivers for device controls; e.g. disk driver for reading and writing on the disks
  - Implement a virtual memory system for demanding paging, including page replacement and page fault handling
- Developed a site for fitness enthusiasts to connect with others and track their progress
  - Implemented RESTful web service in Django; Front-end and back-end are totally separate
  - Designed website front-end in Angular JS and Zurb Foundation
  - Followed Scrum programming process in a group of eight with 2 meetings per week
- Developed an aesthetically appealing web tool with a user-friendly interface for semantic-preserving **word cloud**
  - Stemmed and ranked text input by implementing natural language process in Java and GWT
  - Applied five different algorithms of computing similarities of word pairs so that the word cloud can have various semantic-based layouts with diverse Fonts and color styles
- Created a interactive question-and-answer social website in PHP, jQuery, mySQL for those who want to promote knowledge
  - Followed relational database model; Questions, answers, tags, votes and users are mapped with each other
  - Implement web authorization and authentication; e.g. passwords are encrypted with SHA
  - Practiced AJAX and asynchronous programming
- Designed a web app for tracking mobile user information using JSP and JDBC to connect to an Oracle database

VOLUNTEER

Web developer, Horizons for Refugee Families   June, 2014 - Present

- Redesign and develop the web application for a non-profit orgnization through WordPress and various plugins