# SILAO XU

EMAIL: silao\_xu [at] brown.edu TEL: 401-559-4292 GIT: github.com/writecoffee

**OBJECTIVE** 

A passionate developer, seeking an internship to work on real-world problems in the summer of 2013, pursing practical skills and improvement.

**EDUCATION** 

Brown University, Providence, RI

Sc.M., Computer Science

2012 - 2014 (expected)

• CS 168 - Computer Network

CS 127 - Database Management Systems

Sichuan University (SCU), P. R. China

B.E., Software Engineering, Sep. 2007 - Jun. 2011

major GPA: 90/100

**EXPERTISES** 

C/C++, Python, Java, MySQL, git, vim-as-an-ide, valgrind JUnit, Visual C#, ASP.NET/Silverlight, openSVN, Lex, Yacc, GUITAR

current focus prior experience

SELECTED ACADEMIC PROJECTS

#### TCP over IP over UDP

CSCI 1680, Brown University

Oct. 2012 to Dec. 2012

- Constructed the network layer of a Virtual IP Network, using UDP as link layer. The network can use IP protocol to communicate and the RIP protocol to handle packet routing.
- Implemented a simple, but RFC-compliant form of TCP on top of IP, including states machine for connection setup and teardown and sliding window protocol that determines what data are allowed to send and receive at any point.
- Exported customized socket API.

## **Automated GUI Testing Framework**

Lab of Software Automated Testing, Dept. of CS, SCU

Feb. 2011 to Feb. 2012

- Constructed a framework to evaluate the assertion based GUI testing tool (*JUnit*) and automated GUI testing framework (*GUITAR*).
- Lead an undergraduate team (4 people) to use *JUnit* to perform assertion based GUI testing for a *Java EE* based Office suite.
- Created test environment and test data with six types of faults seeded.

### **Automated Unit Testing Module for Database System**

Lab of Software Automated Testing, Dept. of CS, SCU

Jan. 2010 to Feb. 2011

- Designed a system architecture in C++ to parse and process SQL statements into reserve relational algebra tree, annotate the object models based on database schema.
- Transformed data manipulation statements (Delete/Insert/Update) into query.
- Generated test data for database testing given the schema and SQL statement.

#### **Nach OS Experiment**

Operating System Course, Dept. of CS, SCU

March. 2010 to Jul. 2010

- Implemented a shell for system calls for NachOS over Linux.
- Implemented a module for Thread scheduling based on time slicing and round-robin algorithm.
- Implemented a simple virtual memory module for paging and swapping.

#### INDEPENDENT Mafia Game based on Silverlight 2.0

**PROJECT** 

Digitial Entertainment Contest, Dept. of CS, SCU

Dec. 2008 to Jul. 2009

- Developed an sever-client based game based on Silverlight 2.0.
- Sticked with the game logic of the party game and let players to communicate in text line.

#### INTERNSHIP

## **Online Diary Web Application**

Witty Software Ltd., Chengdu, Sichuan, P. R. China

Jul. 2009 to Sep. 2009

- Adopted .NET techniques and developed public modules including database storage & access, photo uploading & processing and accounts maintenance. Converted these modules into reusable middleware.
- Designed the logic database and set up the physical database system in *SQL Server* and wrote stored-process scripts for database.