

# Rui Zhang

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## EDUCATION

### UNIVERSITY OF FLORIDA

#### MS IN COMPUTER SCIENCE

Expected May 2016 | Gainesville, FL  
Cum. GPA: 3.92 / 4.0

### HUAZHONG UNIVERSITY OF SCIENCE & TECHNOLOGY

#### BE IN AUTOMATION

Sep 2010-Jun 2014 | Wuhan, China  
Cum. GPA: 3.64 / 4.0

## LINKS

Github:// [RayZ-O](#)

LinkedIn:// [ruizhang91](#)

HackerRank:// [ruizhang](#)

## COURSEWORKS

### GRADUATE

Database System Implementation  
Analysis of Algorithms  
Advanced Data Structures  
Introduction to Data Science  
Distributed Operating Systems  
Programming Language Principles

### UNDERGRADUATE

C Programming Language  
Computer Networks  
Data Structures  
Database Management Systems  
Probability and Statistics

## SKILLS

### PROGRAMMING

Over 30000 lines:

C++ • C++11

Over 5000 lines:

Java • Scala • Python

Familiar:

Shell • Go • HTML • JavaScript • SQL

### TOOLS

git • gdb • Valgrind • perf • sbt

### FRAMEWORKS

GoogleTest • Akka • spray • REST •  
Hadoop • MapReduce • Pandas

### CLOUDS

AWS • OpenStack

## EXPERIENCE

### XBROTHER | SOFTWARE ENGINEER, INTERN

Jun 2015 – Aug 2015 | Shenzhen, China

- Deployed and tested OpenStack on bare-metal servers with different configurations and architectures.
- Developed periodically information collection, update propagation and search by content for OpenStack Swift storage base on OpenStack Swift API in Python.

## RESEARCH

### GROKIT-LARGE DATA PROCESSING ENGINE | STUDENT ASSISTANT

Sep 2015 – Present | Gainesville, FL

- Rewrote the memory allocator, which improved the performance by 12%.
- Created unit tests that covered 98% of code.
- Currently working on improving the performance of execution engine by implementing delayed CPU token for congestion control.

## PROJECTS

### DATABASE IMPLEMENTATION | C++ • GOOGLETEST • PTHREAD

Jan 2015 – Apr 2015

Coded a 14k lines single-user multi-threading Database Management System that supports a subset of SQL and some basic Relational Algebra Operations.

### SECURE FACEBOOK SIMULATOR | SCALA • AKKA • SPRAY

Sep 2015 – Dec 2015

Simulated a minimal subset of RESTful Facebook Graph API with end-to-end encryption for all personal data using AES and RSA.

### DISTRIBUTED BITCOIN MINER | SCALA • AKKA

Sep 2015 – Oct 2015

Implemented distributed Bitcoin miner using Actor model, run SHA-256 on 56 machines in parallel on different number ranges and collect bitcoins.

### NIST DATA SCIENCE PRE-PILOT EVALUATION | JAVA • HADOOP

Oct 2015 – Dec 2015

Participated in NIST Data Science Pre-Pilot Evaluation, designed various constraints and created MapReduce jobs to clean 150GB traffic lane detector measurements containing incorrect flow values and correct extraneous flow values.

### COMPILER IMPLEMENTATION | JAVA • JUNIT • ASM

Jan 2015 – Apr 2015

Implemented a compiler for a java-like programming language using Test-Driven Development, including Scanner, Parser, decorating Abstract Syntax Tree, Type Checking and Code Generation.

## AWARDS

2011	National Encouragement Scholarship of China
2014	Achievement Award Scholarship of UFL
2012	Academic Award Scholarship of HUST
2012	Excellent Student Leader of HUST