

# Yi Zhen | Curriculum Vitae

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## Experience

- Apr. 2017 – Present, Software Engineer, *Citigroup Inc.*, Shanghai, P.R.China
- Feb. 2014 – Apr. 2014, Research Assistant Intern, *Guangdong Province Key Laboratory of Computational Science*, Guangzhou, P.R.China

## Education

**University of Edinburgh** **Edinburgh, U.K.**  
*Master of Science in Artificial Intelligence, Pass with Merit* *Sep. 2015 – Nov. 2016*  
Dissertation: Deriving Pretty-printing for Haskell, supervised by Prof. Philip Wadler

**Sun Yat-sen University** **Guangzhou, P.R.China**  
*Bachelor of Engineering in Software Engineering, GPA : 3.3* *Sep. 2011 – Jun. 2015*  
Recommended for admission to SYSU and exempted from Gaokao because of well performance at NOIP

### Major Courses

Machine Learning & Pattern Recognition, Automated Reasoning, Secure Programming, Types and Semantics for Programming Languages, Compiler Optimisation, Artificial Intelligence, Algorithm Design and Analysis, Data Mining, Numerical Computation Methods

## Skills

### Programming Language and Framework

**Languages:** Java, C/C++, Python, Haskell, Scala, Prolog, Coq, Scheme

**Frameworks & Tools:** Spring, Ext JS, JUnit, Mockito, JDBC, JMS, Java servlet, SQL, TensorFlow, Tomcat, Git, SonarQube, Spark, Amazon EC2, NuSMV, Isabelle, Vim,  $\LaTeX$

### Professional Skills

- Machine Learning and Knowledge Representation (Knowledge Graph)
- Full-stack development, RESTful API design and Continuous Integration for web application

## Miscellaneous

### School Team

#### Sun Yat-sen University ASC Student Supercomputer Challenge Team

*Team member* *2014*

- ASC14 required the team to wring the most HPC performance out of a 3000W power allowance
- Mastered the numerical methods, relevant algorithms, heterogeneous and multiprocessor programming
- Optimized the SU<sup>2</sup> – a Stanford University developed open-source C++ code for PDE analysis and designed things that adhere to PDE constraints, and assisted in the HPL event

## Projects.....

### Project Lambda

**founder**

*web app*

*Nov. 2016 – Jan. 2017*

A Hacker-News-like social information platform focusing on IT industry and computer science, which users could publish general news, academic contents and questions through it. Reducing time wasting on nonnutritive information is the major goal

**Keywords** Haskell 8.0.2, Scotty, Persistent, mime-mail, websockets, Blaze, PostgreSQL, Bootstrap, jQuery

**Github Address** <https://github.com/ProLambda/Times>

### PPrinter: A generic derivable Haskell pretty printer

**author**

*package*

*Jun. 2016 – Aug. 2016*

PPrinter is a Haskell library that supports automatic derivation of pretty printing functions on user defined arbitrary data types (the deriving mechanism supports the automatic generation of instances for functions)

**Keywords** Dissertation Project, Hackage, Haskell 7.10.2

**Hackage Address** <http://hackage.haskell.org/package/PPrinter-0.1.0>

### Compiler of Small-C

**developer**

*system software*

*Oct. 2015 – Dec. 2015*

A compiler for the subset of C language that compiles the source code to Java bytecode. It contains the essential parts of a standard compiler including lexer, parser, semantic analyzer and code generator

**Keywords** Java 7, ASM 4

**Github Address** <https://github.com/i-zhen/Reactor-C>

### Interpreter of ML-like Programming Language

**developer**

*local app*

*Oct. 2015 – Oct. 2015*

An interpreter written in scala for a simple ML-like programming language which supports syntactic sugar, type checking, recursive function and first-order lambda calculus

**Keywords** Scala 2.11.7

**Github Address** <https://github.com/i-zhen/Apache-Longbow>

### The Student Activity Center(SAC) Room Reservation System

**full-stack developer**

*web app, not open source*

*Apr. 2013 – Jun. 2013*

Designed a room reservation system for the Student Activity Center in Sun Yat-sen University. Students can use this system to book rooms in SAC and managed their own information

**Keywords** Python 2.7.5, Javascript, MySQL, web.py, Bootstrap, jQuery

### The Kernel of Online Judge

**indie developer**

*server-side module*

*Mar. 2012 – Apr. 2012*

This is an online system that can compile and execute codes and then test them with pre-constructed data. Users submit code and run it with restrictions (time limit, memory limit, etc.). The output of the code will be compared with the standard output and then return the result to the users

**Keywords** C/C++, Linux, Linux-API

**Github Address** <https://github.com/i-zhen/Simple-OJ-core>

## Awards

### Top 23%

*Alibaba Tianchi Big Data Competition - AI Aid for Genetic Risk Prediction of Diabetes* Jan 2018

### First Prize and Highest Linpack Award

*The ASC Student Supercomputer Challenge (ASC14)*

2014

Set a new world record of HPL(Linpack) performance and won ¥10,000 CNY

### Bronze Medal (Third Prize)

*The ACM-ICPC China Guangdong Provincial Programming Contest (GDCPC)*

2014

### Two-time recipient of First Prize

*The National Olympiad in Informatics in Provinces (NOIP)*

2009&2008