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

Miscellaneous

Job Projects

WIRE **engineer at Citigroup**

Wire Transfer system for block trading agent *Aug. 2017 – Present*

Customers book payment, pre-advice and deposit wire transfers on the platform

- Full-stack development for Currency Eligibility module: Developed front-end using MVC model with the help of Ext JS. Implemented CRUD, approval and drill-down analysis of Available Straddle value. Using Facade, Factory and Dynamic Proxy patterns designed and implemented controller, services and DAO for back-end
- Developed reconciliation module for downstream data warehouse team: abstracted business logic to TCP-like 3-way handshake protocol through FSM. Implemented asynchronous unmarshalling message ability
- Debugging existing bugs and analyzing daily logs. Continuous Integration

EWARA **engineer at Citigroup**

Anti money laundering platform *Apr. 2017 – Aug. 2017*

- Implemented approval logic for tree-form entities. Developed general DAO for arbitrary tables by JDBC
- Participated in email alert ability implementation, RESTful API design, PDF report module enhancement
- Using reflection techniques to extend POJO test module for automation unit test

HAMSTER **engineer at Citigroup**

Experimental AI project *Jun. 2017 – Aug. 2017*

Recognition and NLP for scanning image of bank statement. Writing and debugging image alignment algorithm

Side 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`
Chinese Blog Article `https://izhen.me/2017/08/20/aws-lambda/`

PPrinter: A generic derivable Haskell pretty printer **author**

Haskell Library - 1413 times download till 05/27/2018 *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

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^2 – 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

Professional Skills

Programming Language and Framework

Language: Haskell, Java, C/C++, Python, Ruby, Swift, Ocaml, Scala, Prolog, Coq, Isabelle

Framework: Spring, JMS, Ext JS, JUnit, Mockito, JDBC, Logger, Java servlet, SQL, Jaxb2Marshaller

Tools: Jenkins, uDeploy, AutoSys, JIRA, Git, SonarQube, Amazon EC2, NuSMV, Vim, Eclipse, LaTeX

Awards

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*

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