

# Yi Zhen | Curriculum Vitae

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## Experience

- Mar. 2021 – Present, Senior Software Engineer, [Ant Group](#), Shanghai, P.R.China
- Nov. 2018 – Mar. 2021, Software Engineer, [Huawei Research](#), Shanghai, P.R.China
- Apr. 2017 – Nov. 2018, Software Engineer, [Citigroup](#), Shanghai, P.R.China

## Job Projects

### Tech Architect & Chief Developer

**Ant Group**

*Research and development, project manager of Sonar, Gödel*

*Mar. 2021 – Present*

**Sonar Smart Contract Lang** A brand-new asset-safe smart contract programming language for WASM

**Gödel Data Analytics Engine** Datalog-based query programming language; Powered by Soufflé

**Semi-Parsing System** Persistent Robust(Fault Tolerance) Compiling System for C/C++/ObjC

### Tech Lead

**Huawei Research**

*Development and leading the architecture design*

*Nov. 2018 – Mar. 2021*

**Bitfun Codeless Platform** Lowcode [platform](#) for UI Design; SwiftUI-like plug-in for VSCode/IntelliJ

**HMS Toolkit** IDE [plug-in](#) provides all the tools users need to develop their own HMS Core-integrated app

**OpenArkCompiler** Unified programming platform supporting multiple devices and languages

### R&D Engineer

**Citigroup**

*Development and Continuous Integration*

*Apr. 2017 – Nov. 2018*

**WIRE** Wire transfer system of block trade agent to book transfer and income

**EWARA** Anti-Money Laundering risk control system of data collection and management, risk value analysis

**HAMSTER** Experimental machine learning project of bank statement understanding

## Miscellaneous

### Publications

- Z. Cao, **Y. Zhen**, G. Fan and S. Gao, "TokenPatronus: A Decentralized NFT Anti-theft Mechanism," arXiv:2208.05168 [cs.CR], Aug. 2022. (WIP)

### Side Projects

#### ERC721G: Anti-Theft ERC721 Solution

**author**

*web3 smart contract*

*Jun. 2022 – Oct. 2022*

World's First Anti-Theft NFT Series and Solution: A universal technical solution to be adapted to any ERC721 standard smart contract to help NFT holders guard their property security jointly

**Github Address** <https://github.com/turtlecasedao/OpenERC721G>

**OpenSea Address** <https://opensea.io/collection/turtle-case-gang>

#### Project Lambda

**founder**

*web2 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

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

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

**Website Address** <http://sweetpotato.ai>

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

**author**

*Haskell Library - 3525 times download till 09/20/2022*

*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)

**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

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

## **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

## **Professional Skills**

### **Programming Language and Framework**

**Language:** Rust, Solidity/Cairo, TypeScript, Haskell, C/C++, Java, Python, Scala, Prolog, Coq

**Framework:** Hardhat, web3.js/ether.js, clang/vscode-clangd, Spring, JMS, Mockito, JDBC, ASM

## **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**

*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*

*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*

*Sep. 2011 – Jun. 2015*

Recommended for admission to SYSU and exempted from Gaokao because of well performance at NOIP