Daniel Zhou | Résumé

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Vocational Experience

Shanlin Tech. (a crypto start-up)   **Hangzhou**
CTO & Co-founder   *Feb 2018–Jan 2019*
- Designed architectures for key projects.
- Led a team of four, and developed a cryptocurrency wallet microservice.
- Developed the backend of a peer-to-peer cryptocurrency trading platform with Koa.

Self-employment
Cryptocurrency Trader   *Aug 2016–Jan 2018*
- Gained 250x annual profit from intern wages of 1500USD, through crypto-derivatives.

Baidu Research, Baidu Inc.   **Beijing**
Algorithm Research Intern   *Oct 2015–Jul 2016*
- Independently developed a compression algorithm for human DNA sequencing data, achieving a preferable compression ratio over state-of-the-art tools.
- Independently developed a gradient tree boosting algorithm with importance sampling and Hessian matrix approximation, achieving dramatical learning efficiency (5x–18x acceleration on real-world datasets) over legacy gradient tree boosting.

Voluntary Experience

Coursera & Princeton University
Invited Mentor   *Jan 2018–Jun 2018*
- Assisted students in working through the online course *Bitcoin and Cryptocurrency Technologies*.

Education

University of Washington (admitted)   **Seattle**
M.S. in Computation Finance & Risk Management
- Admitted but unable to attend on-site in September 2020 due to visa restrictions. Will switch to a remote part-time program.

Central China Normal University   **Wuhan**
B.Eng. in Software Engineering, GPA 3.56/4   *Sep 2012–Jun 2016*
- Chaired The Competitive Programming Team of the university, Sep 2013–Jun 2015
  - Skilled in dynamic programming, graph theory algorithms, and advanced data structures.
  - Coached & coordinated 30 peers participating in programming competitions.
  - Organised 4 programming competitions with 400+ participants from 6 universities.

Awards

ACM International Collegiate Programming Contest, Asia Regional   **Xi'an**
Silver medal   *Oct 2014*

Preprint

Daniel Chao Zhou, Zhongming Jin, and Tong Zhang. A fast sampling gradient tree boosting framework. arXiv 1911.08820, 2019.

Programming Works

Braavos   **NestJS & TypeScript**
`https://github.com/nerddan/braavos`   *Sep 2018*

Braavos is a distributed cryptocurrency wallet microservice that supports Bitcoin, Omni tokens, Ether, and ERC20 tokens. It features an E2E testing module that runs PostgreSQL, RabbitMQ, and blockchain nodes in sandboxes with Docker Compose to emulate a distributed environment.

Regex2DFA   **C++**
`http://nerddan.github.io/regex2dfa`   *Sep 2014*

Regex2DFA is a compiler that converts regular expressions into images of deterministic finite automata (DFA). Such conversion was achieved through Thompson's NFA construction algorithm, the powerset construction algorithm, and Brzozowski's DFA minimisation algorithm. The project was implemented in C++ and compiled into WebAssembly, which enables the project being demonstrated in a webpage with superior efficiency.

MOOC Achievements

Introduction to Numerical Analysis	**Higher School of Economics, Coursera**
100%	*Feb 2020*
Econometrics: Methods and Applications	**Erasmus University Rotterdam, Coursera**
100%	*Feb 2020*
Machine Learning Engineer Nanodegree Program	**Kaggle & AWS, Udacity**
100%	*Jan 2020*
Bitcoin and Cryptocurrency Technologies	**Princeton U, Coursera**
100%, Mentor	*2017*
Maching Learning	**Standford U, Coursera**
100%	*2015*
Algorithms, Part II	**Princeton U, Coursera**
100%	*2013*
Algorithms, Part I	**Princeton U, Coursera**
100%	*2012*

Languages Skills

English: full working proficiency   **Mandarin Chinese**: native
Japanese: Duolingo checkpoint 3/7   **Cantonese Chinese**: elementary proficiency