YIXIN BAO

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EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Master of Science in Information Technology   Aug. 2018 – May. 2020
Tianjin University   Tianjin, China
B.S. in Computer Science and Technology   Sept. 2014 – Jul. 2018

SKILLS

- C, Swift, Objective-C, Java, Python, JavaScript, Node.js, SHELL, SQL
- Proficient in Object-Oriented Programming
- Experienced in Systems Programming, Networks Programming, iOS Developing, and Web Developing
- Experienced in Sketch and other Design and Prototyping tools

COURSEWORK

- **Undergraduate:** Database Principles, Compiler Principles, Computer Networks, Algorithms, Data Structures, Linear Algebra, Discrete Math, Web App Development, etc.
- **Graduate:** Introduction to Computer Systems (15513), Storage Systems (15746), Search Engines (11642), Introduction to Information Security (14741), Computer Networks(15-641), Distributed Systems (15-640)

RESEARCH & INTERN EXPERIENCE

Software Engineer, Apple   May. 2019 – Aug. 2019
- *Core Bluetooth*
  - ✧ Designed and implemented an automation system that parses Bluetooth data logs of connections between devices, analyzes events and generates an easy-to-use representation of Bluetooth connections for developers

Software Engineer, Ant Financial, Alibaba Group   Jun. 2017 – Sept. 2017
- *Alipay iOS*
  - ✧ Rewrote modules, implemented module Tiny Merchant Life and was a member of the Mini Programs project.
- *Alibaba IoT Hackathon*
  - ✧ Designed and built an app providing real-time info of six elevators and suggesting the most efficient routes.
- *Speech at Alipay: Machine Learning on iOS*
  - ✧ Demonstrated Freud, my open-source machine learning library. Showcased applications with Freud built in.

Research Assistant at Tianjin University   Sept. 2016 – Jul. 2018
- *Neural Network and Speech Recognition | C++, Python, SHELL*
  - ✧ Incorporated Kaldi and neural networks to make a non-acoustic speech-recognition system.

Leading Software Engineer, TWT Studio   Feb. 2015 – Jul. 2018
- *Designer, Software Engineer and*
  - ✧ Led a team of 12, designed and wrote native and hybrid iOS apps like WePeiYang, Wenjin, and Vote.

PROJECTS

Liso – A web server written in C that handles HTTP requests and serves web content (**C**)

HomemadeTCP – A homemade full functional TCP protocol implemented from scratch (**C**)

CloudFS – A hybrid file system spanning SSD and cloud storage It even has deduplication, snapshot and cache (**C, FUSE**)

MyFTL – An SSD Flash Translation Layer that does physical-logical address mapping and SSD garbage collecting(**C**)

QryEval – A search engine on a corpus of 500,000+ documents. It supports different kinds of retrieval models (**Java, Lucene**)

Malloc – A homemade full functional malloc implementation (**C**)

Freud – A machine learning library including a matrix library, neural networks and genetic algorithms (**Swift**)

Daedalus - A MineSweeper Game (**Qt**, **C++**)

Swifty-Klotski - A Klotski game with a fast AI (**Swift**, **SpriteKit**)

2PC – A Two-Phase Commit protocol to reach consensus in a large-scale distributed system (**Java**)

WePeiYang-iOS – The iOS app of Tianjin University (**Obejective-C**, **Swift**)

Wenjin-iOS – The iOS app of Wenjin Community in Tianjin University (**Objective-C**, **Swift**)

PiperChat – A beautiful Instant Messaging app (**Swift**, **Node.js**, **MongoDB**, **Redis**, **Realm**)

tsh – A simple shell with support for multiple processes (**C**)

Brainfuq – An interpreter and REPL for and esoteric language Brainfuck (**Java**, **SHELL**)

Facial-Rec – An iOS face tracking and recognition app with an OpenFace model in it (**Swift**, **Python**)

EXTRACURRICULAR ACTIVITIES

Amazon Kindle Store, Amazon.com / Writer	Sept. 2013 – Present
Douban, read.douban.com / Writer	Sept. 2013 – Present
Eyes Forest Magazine / Editor	Sept. 2014 – Jul. 2018