Danny Chen

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EDUCATION

Bachelor of Science in Computer Science *2012-08/2016-05*
University of Texas at Austin
Coursework: Operating Systems, Cryptography, Algorithms, Network Security, Artificial Intelligence, Automata Theory, Theory of Computation

TECHNICAL SKILLS AND KNOWLEDGE

Languages: C, Bash, Python, x86 Assembly, Java, Javascript, Golang, Ruby
Technologies/Tools: Amazon EC2, Amazon VPC, Git, Travis CI
Operating Systems: Linux

EXPERIENCE

Software Development Engineer II *2016-07-05/Present*
EC2 Networking, Amazon Web Services

- Worked as part of a team that performs routing and packet translation for all network traffic going in and out of EC2 worldwide.
- Worked on and maintained a low-level packet processing application written in C.
- Implemented the network security layer for Inter-Region VPC Peering.
- Worked on a 24/7 oncall shift to troubleshoot hardware and software failures in production.
- Designed and oversaw projects to improve operational overhead and alleviate technical debt, often in conjunction with other teams in AWS.

Software Development Engineer Intern *2015-07-02/2015-08-28*
Platform Excellence, Amazon.com

- Worked as part of the team that monitors latency on the Amazon.com website.
- Created a data visualization tool for a terabyte-scale Redshift cluster.

Software Developer Intern *2014-07-02/2014-08-27*
Software Verification Team for WebSphere Application Server, IBM

- QA and tested IBM WebSphere.
- Wrote scripts to do automated testing of new releases of Websphere.

PERSONAL PROJECTS

Minecraft Client - https://github.com/NosotrosNueces/mcc

- Collaborated with friends to implement the Minecraft Client protocol.
- Provides an API for sending commands to the server like digging and moving.
- Allows for asynchronous handling of messages from the server through user-specified callbacks. Backed by libuv, the same library that handles asynchronous I/O for Node.js.
- Implemented simple bots that can break blocks, attack enemy entities, and build structures.

Gameboy Emulator - https://github.com/mukkid/GoBoy

- An active collaborative project with a friend to implement software emulation of the Gameboy console.
- Completed full emulation of the Z80 CPU
- Adopted and enforced test-driven development and CI practices.

Chess AI - http://github.com/SrsBusiness/Party

- Game state is represented using bitboards and transitions between states are implemented efficiently with bitwise operations and table lookups.
- Uses AI techniques such as alpha-beta pruning, transpositional hash tables, and iterative deepening.

Fast Fourier Transform - http://github.com/SrsBusiness/FFT

- A minimal implementation of the Cooley-Tukey algorithm to compute discrete Fourier transforms.