

Jason Pham

jasonpham.ca

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Skills

Languages: Java, Python, C, C++, C#, JavaScript/TypeScript, Kotlin, SQL, HTML, CSS

Technologies: Node.js, React, PostgreSQL, Unix, POSIX, OpenMP, MPI, CUDA, AWS, Tensorflow, PyTorch, Unity

Experience

Airbnb

San Francisco, CA

Software Engineering Intern, Security

May 2019 - August 2019

- Designed and implemented an AWS service allowing other Airbnb services to share encrypted files with third parties (e.g. guests, hosts, government agencies) using Dropwizard and Node.js
- Developed an automated system to detect Airbnb services that do not respond to GDPR EAP requests and alert the relevant engineers and teams via Slack and Jira, ensuring all Airbnb services comply with EU law
- Architected a presigned URL system for Airbnb's encrypted file storage system to authenticate download requests
- Designed machine learning models to detect street addresses (PII/personal data) in Airbnb's datastores
- **Technologies Used:** Java, Dropwizard, Apache Thrift, Javascript, Node.js

Google

Mountain View, CA

Software Engineering Intern, Daydream VR

May 2018 - August 2018

- Designed and implemented a backend service to deliver Youtube VR livestreams in Daydream Home
- Reworked Daydream and Youtube VR's frontend and backend to include a more user friendly way to launch into copresence, a way to experience YouTube VR content in groups
- Revamped Daydream Home's caching system to better serve time-sensitive content
- Integrated Youtube VR's C++ Toast messaging system to the Android Java Layer via JNI
- Rebuilt the UI promo card designs for the Daydream Home 2D and VR client variants
- **Technologies Used:** Java, C++, JNI, Android, protobuf, Bazel

Projects

More at jasonpham.ca/projects

kotNES →

- A high performance Kotlin Nintendo Entertainment System and MOS 6502 Emulator
- Supports native rendering output via OpenGL, Direct3D, X, and GDI
- Implements various memory mappers with fully timing accurate picture processing unit and CPU instruction set

Hoard Memory Allocator →

- An efficient and scalable malloc for multithreaded applications based on the [paper](#)

Epochalypsic →

- Built an asymmetric Virtual Reality hide and seek game with the Unity game engine
- Implements polygon and rendering optimizations to meet the standards of SteamVR's 90 frames-per-second

Awards & Achievements

- 1st place team out of 190, MHacks X
- Hack the North 2018 Finalist (Top 12 of 242 teams), developing a biometric 3-factor authentication device
- 1st place team out of 30, UTSCode 2017
- Member of the University of Toronto's 2016, 2018, 2019 ACM-ICPC team

Education

University of Toronto

June 2020

Honours Bachelor of Science in Computer Science

Toronto, Canada

- Teaching assistant for CSC209 "Systems Programming" offering