Marcus Tan

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Experience

Founder - Zenith Arcade, zenitharcade.com, Vancouver, BC, Canada. (Jun. 2024 - Present)   **Javascript**
Zenith specializes in importing and restoring Japanese arcade machines.

- Imported, sold, and leased over $300K CAD worth of arcade machines to small businesses across Canada.
- Performed a wide variety of repairs and upgrades to ensure a high level of customer satisfaction.
- Developed a custom card reader and point of sale system to manage arcade credits in a commercial setting. Deployed and maintained this system in 3 commercial locations across Canada. Built hardware to manage card transactions and software to manage payments, metrics and bookkeeping.

Software Engineer - Apple, Cupertino, CA. (Oct. 2022 - Jun. 2024)   **Objective-C**
I worked on a low-level on-device networking daemon whose clients include FaceTime and SharePlay.

- Owned the component responsible for delivering spatial persona data in FaceTime calls on VisionOS. Worked intensively with QA to polish the call experience leading up to the launch of the VisionPro.
- Supported a feature to add end-to-end encryption to previously unprotected metadata packet headers.
- Re-factored a key component responsible for managing media encryption key rolling and distribution logic.
- Implemented various metrics to measure connection speed and call quality in FaceTime calls.
- Debugged memory leaks with ASAN, preventing app crashes in edge cases.

Software Engineer - SGNL.ai, sgnl.ai, Palo Alto, CA. (Apr. 2022 - Jul. 2022)   **Golang, Python**

- Built a prototype data pipeline to ingest company information from various sources into a Graph database.

Software Engineer - Rubrik, rubrik.com, Palo Alto, CA. (Oct. 2020 - Feb. 2022)   **Scala, Python**
I supported the backup and recovery of VMware virtual machines via the Rubrik platform.

- Built new integrations allowing Rubrik to support virtual machines backed by third party Flash Arrays (Pure Storage & Dell EMC.)
- Optimized metadata persistence workflows utilized during replication in order to improve garbage collection performance and reduce Rubrik's memory footprint.
- Rewrote end to end tests and infrastructure in order to improve build quality. Improved component test pipeline pass rate from ~70% to 100% which resulted in faster and more qualified builds.

Software Engineer Intern - Rubrik, rubrik.com, Palo Alto, CA. (May. 2019 - Aug. 2019)   **Golang, Scala, Python**

- Designed and deployed a Go Thrift server to service internal company VMware API usage. Created API endpoints to support vSphere tagging and I/O filtering. Implemented persistent session management.
- Pushed features to the Govmomi open source library in order to support specific VMware API endpoints.
- Wrote command line tools, unit testing suites and design documents to ensure project maintainability.

Software Engineer Intern - Rubrik, rubrik.com, Palo Alto, CA. (Sept. 2018 - Dec. 2018)   **Scala, C++, Python, Bash**

- Created a feature to enable the recovery of enterprise systems utilizing external data encryption protocols. Accomplished this by implementing extended attribute restoration for VMware virtual machines.
- Supported this feature for both Windows and Linux and implemented multiple ways for customers to recover their data.

Education

B.Sc Hons, Computer Science, The University of Toronto, Toronto, ON. (2015 - 2020)

- Data Structures & Algorithms, Operating Systems, Functional Programming, Artificial Intelligence
- Teaching Assistant: Computer Organization, Systems Programming, Web Programming

Skills

Languages   Python, C, Objective-C, C++, Scala, Java, Go, Javascript, Bash