Marcus Tan

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Education

B.Sc Hons, Computer Science, The University of Toronto, Toronto, ON. (2015 - 2020)
- Data Structures & Algorithms, Operating Systems, Functional Programming, Artificial Intelligence

Experience

Software Engineer - Rubrik, Palo Alto, CA. (Oct. 2020 - Present) — **Scala, Python**
Working to support the backup and recovery of VMware virtual machines.
- Built new integrations allowing Rubrik to support virtual machines backed by third party Flash Arrays (Pure Storage & Dell EMC.) Implemented end to end and unit test suites for this feature.
- Optimized metadata persistence workflows utilized during replication in order to improve garbage collection performance and reduce Rubrik's memory footprint.
- Revamped the VMware teams end to end tests and infrastructure in order to reduce flakiness. Improved internal test pipeline pass rate from ~70% to 100% in order to qualify Rubrik's 5.3 and 6.0 releases.

Software Engineer Intern - Rubrik, Palo Alto, CA. (May. 2019 - Aug. 2019) — **Go, 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 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 longevity.

Software Engineer Intern - Rubrik, 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 VM's. Customers could choose to recover their workloads through either VMware tools or the Rubrik agent.

Teaching Assistant - The University of Toronto, Toronto, ON. (Jan. 2018 - Jan. 2020)
- Computer Organization (2018), Software Tools & Systems Programming (2019), Programming on the Web (2019)

Software Engineer Intern - ParseHub, parsehub.com, Toronto, ON. (Nov. 2017 - Apr. 2018) — **Javascript**
- Applied performance optimizations to a distributed web scraping as a service solution.
- Iteratively developed various front end features based on user testing in order to improve usability.

Software Engineer - Brizi, brizicam.com, Toronto, ON. (May. 2014 - Dec. 2015) — **Javascript (Angular)**
- Created web apps allowing fans to view a drone livestream, take a photo and share it to social media.
- Designed a multi queueing system using Redis to distribute user snapshot requests among numerous cameras, allowing users from different locations to take photos concurrently.
- Architected an API using the MEAN stack to manage users, snapshots, payments and Cloudinary image filters.

Projects / Achievements

WomboCombo - Winner of the Teach Category: Riot Games Hackathon, (2017) — **Javascript (Vue)**
- An input visualization tool for a hackathon focussed on improving League of Legends player experience.

SoundCloud Downloader, github.com/invoqwer/soundcloud-downloader, (2017) — **Javascript (Phantom)**
- A tool to scrape large sets of mp3 files in parallel from a given stream. Used FFMPEG to write metadata.

Skills

Languages	Python, C, C++, Scala, Java, Go, Bash, SQL, Javascript, HTML/CSS
Technologies	VMware, Cassandra, Redis, MongoDB, Web Scraping