ROBERT MASCITELLI

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PERSONAL SUMMARY

Experienced **Software Engineer** offering an academic background in **Computer Engineering** and **6+ years** of experience driving product-focused software development, debugging, and optimization activities. I have a passion for diving into complicated systems and gaining a deep understanding of how they work - then sharing my knowledge with the team so that we can all grow stronger!

SKILLS AND PROJECTS SUMMARY

Technical Skills:

- **Languages:** Golang, C / C++, Python, JavaScript/TypeScript
- **Tools:** SQL (Postgres), noSQL (MongoDB), Docker, Terraform, gdb / WinDbg
- **Platforms:** AWS, GCP, Grafana, Jenkins, Prometheus, Datadog

PROFESSIONAL EXPERIENCE

Software Engineer III | Synctera Inc. – Toronto, ON **July 2024 - present**

- **Tech Stack:** Golang, Typescript, PostgreSQL, GCP (Google Cloud Platform)
- Designed and implemented RESTful microservice APIs for embedded finance as well as various in-house platform observability tools for an early-stage, venture-funded SaaS startup, post-Series A.
- Developed an ability to deeply understand customer use-cases in a complex, multi-tenanted environment used by many different types of user - often needing to align multiple teams of stakeholders, both technical and non-technical, on the intended changes.

Key Achievements:

- ➔ Initially, my efforts were focused on saving time and frustration for both engineers and customers by providing observability tooling to many areas of the platform:
  - ◆ Eliminated a common, recurring source of frustration from users by writing a Golang middleware to collect RBAC info - which is wrangled from GCP and automatically implemented as extensions in our OpenAPI spec.
  - ◆ Automated user entitlement reviews to achieve security compliance. Tracked user login activity using Typescript and Auth0 webhooks, then reviewed and revoked platform access on inactive users using Golang and GCP CloudScheduler.
- ➔ Later, led projects as part of a 1-year team effort to build an in-platform billing system. This was used to replace a costly and inefficient manual billing system maintained over Excel documents and email:
  - ◆ Developed direct-billing pipeline to pull funds directly from customer accounts in order to secure over $100k from months of delinquent invoice payments. Collected user banking info in a Typescript frontend, which was used by a Golang backend + GCP PubSub to initiate & track ACH payments directly from our invoicing system.
  - ◆ Massively reduced the use of Excel and Slack for accounting by designing an invoice-templating system that could automatically implement a wide array of billing scenarios.

Software Engineer | Rapid7 Inc. - Toronto, ON **Jan 2021 - June 2024**

- **Tech Stack:** Golang, C++, Python, Docker, AWS, Grafana, PostgreSQL
- Designed new features in Golang, C++ and Python for endpoint security solutions. Worked on an Agile team managing over 15 million Windows, Mac, and Linux users worldwide for a global cybersecurity company.

Key Achievements:

- ➔ Prevented loss of 2 million MacOS customers by designing and developing a C++ library (used by Python ctypes) for concurrent event collection on MacOS using the EndpointSecurity API. Concurrency was profiled on Linux using gdb and perf to ensure concurrency requirements were being met. Provided visibility on key performance metrics using PostgreSQL and Grafana.
- ➔ Accelerated my teams' release process from 10-12 days to 2-3 days by developing a collection of worker jobs to perform automated testing and package-management operations. Jobs were developed in Python, using Docker/AWS ECR to store testing snapshots. Tests are launched on EC2 instances through Jenkins, using S3 to store any other needed files.
- ➔ Improved performance of Grafana dashboards by proposing and developing changes to metrics storage – allowing us to scale up to monitoring 10x the customers without performance degradation of dashboards.

Embedded Software Designer | Evertz Microsystems - Burlington, ON **Jan 2019 – Sept 2020**

- **Tech Stack:** C and C++, Python, JavaScript
- Produced various features in C and C++ for embedded devices running Linux for the leading global manufacturer of broadcast equipment that delivers content to TV sets, on-demand services, mobile devices, WebTV, and IPTV.

Key Achievements:

- ➔ Developed a loadable kernel driver that allows embedded devices to be managed by a new Controller Area Network (CAN) bus peripheral. Built web interface using C++ and JavaScript to register and control CAN bus.
- ➔ Developed an object hierarchy in C++ to implement devices described in AMWA NMOS media specifications. Created a Python script to automatically compose header files that was adopted by 2 developers across 10 products

EDUCATION SUMMARY

BEng in Computer Engineering | McMaster University – Hamilton, ON **Graduated Dec 2018**

Relevant Coursework: Digital Systems Design | Systems Programming (C/C++) | FPGA Development (Systems Verilog)