Joseph Azevedo

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Education

Jan 2022 - Dec 2022 | **Georgia Institute of Technology,** Atlanta, GA — GPA: 4.0/4.0
Master of Science, Computer Science
Concentration: Computing Systems

Jun 2018 - Dec 2021 | **Georgia Institute of Technology,** Atlanta, GA — GPA: 4.0/4.0
Bachelor of Science, Computer Science
Concentration: Networking & Graphics

Skills

Languages: Go, Rust, Python, Java, TypeScript, HTML/CSS, C/C++
Software: Git, Docker, Kubernetes, gRPC, Linux, Windows, SQL (Postgres, MySQL) NoSQL (MongoDB, Elasticsearch)
Concepts: Containerization, Microservices/RPC, Unit & integration testing, CI/CD, Benchmarking
Coursework: Data structures, Algorithms, Databases, Networks, Operating systems I/II, Cloud computing, Distributed systems

Work Experience

Aug 2021 - Dec 2021 | **Software Engineering Intern**
Datadog
- Designed a novel monitoring daemon using **eBPF** to collect **HTTPS** traffic from **Go** programs *in-memory & before encryption*
- Utilized **Linux eBPF** & **C**, Linux binary formats (**ELF**, **DWARF**), & **Go** compiler/runtime internals to create proof-of-concept
- Developed code generation tooling to automatically extract **Go** version-specific metadata from compiler artifacts, facilitating a wide range of supported **Go** compiler versions

May 2021 - Aug 2021 | **Software Engineering Intern**
Stripe
- Worked with another intern to develop a **Ruby** client library (incl. automated tests) for an internal config distribution platform
- Developed a last-mile caching sidecar in **Go** (incl. automated tests) to bypass limitations of **Ruby** multi-threading & serve a local **HTTP API**
- Created both **Kubernetes** and **Puppet** deployment configurations to facilitate integration with existing service deployments

May 2020 - Aug 2020 | **Software Engineering Intern**
MathWorks
- Added new features to a **Go** microservice and its **React**/**JavaScript** web dashboard, including unit and integration testing
- Developed a custom **Kubernetes** controller in **Go** to work with internal orchestration service to manage dynamic deployments

Aug 2019 - Dec 2020 | **Teaching Assistant**
Georgia Institute of Technology | CS 2340 - Objects & Design (Object-oriented design)
- Led a team of 6 other teaching assistants to prepare and deliver 15 supplemental lectures over the course of a semester
- Graded project milestones and held office hours for students making a group project in **Java Swing** or **Python Flask**
- Created code style autograder scripts/workflow using **Python** for student projects used by 1,300+ students over 3 semesters

Leadership

July 2019 - Aug 2020 | **President**
Georgia Tech Esports Club
- Led one of the largest student organizations at Georgia Tech with over **300 active members** and **20 competitive teams**
- Planned and led a team of **20 organizers** to host a regional collegiate LAN tournament (Gamefest) with over **400 participants**

Projects

Feb 2020 - Dec 2021 | **rAdvisor**
Open-source system resource utilization monitor for Docker & Kubernetes • elba-docker/radvisor
- Developed a low-overhead monitoring daemon in **Rust** that monitors **Linux cgroups** and polls **Docker**/**Kubernetes**
- Conducted hundreds of distributed cloud experiments using **Python**/**Bash** to test the tool's overhead and consistency
- Wrote final report that details the software design, experimental procedure, and results • elba-docker/report
- Integrated with performance monitoring toolkit during the course of work as a **Research Assistant** at Georgia Tech