Gabriele Viglianisi

📞 +39-3401527376
✉ vigliag@gmail.com
🌐 vigliag.github.io
🌐 linkedin.com/in/gabriele-viglianisi

I am a software engineer with a focus on backends and distributed systems. In the last few years I have implemented performant and reliable cloud services in Go. I am familiar with all layers of a modern architecture, and I can dig into the low-level details to optimize performance or troubleshoot issues.

I have an MSc in Computer Science and Engineering from the Polytechnic University of Milan. I focused my studies on distributed systems and security, with a thesis on malware analysis.

I am reliable, hard-working, and always ready to help. I am currently based in Catania, Italy, but I am open to relocation.

Experience

Stealth-phase startup - Senior Software Engineer September 2021 - current

I am working for a newly founded startup in the cloud data analytics domain. I have developed solutions to securely integrate with AWS and GCP resources in a customer's account, collect usage data, and extract useful insights.

RSTOR

RSTOR is a California-based startup offering cloud storage solutions. RSTOR's main product, SPACE, is an S3-compatible storage service.

Senior software engineer May 2019 - August 2021

- I was responsible for leading the development of RSTOR's S3-compatible interface and the associated components, which scaled to multiple datacenters and several billions of objects. We added support for more S3 features, a shard manager, metadata indexes, and internal data and metadata management tools. We also ensured the software was reliable and easy to monitor and operate.
- I worked closely with the infrastructure team. I maintained dashboards, took part in technical and performance troubleshootings, and contributed to managing and optimizing our Cassandra clusters.

Software engineer (full stack) December 2018 - September 2019

- I wrote parts of a new IAM-compatible user management system, both backend (Go) and frontend (Angular), as well as a file management web UI.
- I developed a new S3 interface in Go for our storage and an associated Cassandra-based metadata layer. The project grew to be the main interface to RSTOR's storage.

IBM Zurich Research Lab - Security research intern April - September 2016

I worked on a research project that explored a novel way to apply black-box fuzz-testing to complex networked applications.

- I studied the state-of-the-art fuzzing methods, and expanded the existing research project.
- I developed an integration with Libvirt and QEMU to communicate with the instrumentation, manage the system states, and reduce the impact of non-determinism.
- I implemented a distributed fuzz-testing infrastructure in C++, using Redis and Thrift to hold state and control workers.

Education

MSc in Computer Science and Engineering 2014 - 2018
Polytechnic University of Milan (Italy) 107/110

My thesis, SysTaint, explored the use of full-system record-replay tools for malware analysis. I wrote QEMU-based instrumentation that extracts data-flow information to help in the reverse-engineering process. The paper SysTaint: Assisting Reversing of Malicious Network Communications was presented at SSPREW 8.
My study plan focused on Security, Cryptography, Artificial Intelligence, and Distributed Systems.

BSc in Computer Engineering 2010 - 2014
University of Catania (Italy) 110L/110

My thesis work was a collaboration with a local startup, PanPan. From April to July 2014, I studied and applied Node.js and MongoDB best practices to improve PanPan's codebase maintainability and reliability.
My study plan included both CS-related courses and engineering courses.

Technologies

Languages and environments: Go, Node.js, Angular, Python, C, C++, Ruby on Rails, Vue.js, Java, QEMU.
Tools and applications: Cassandra, Redis, PostgreSQL, Nginx, Haproxy, Grafana, Kubernetes, Cloudformation, AWS, GCP, Wireshark, strace, Ida, mitmproxy, iperf, pprof.

Personal interests

- At university, I had the pleasure of taking part in CTF security competitions along with my university's team, *Tower of Hanoi*, and at *Defcon CTF 26* as part of *mHACKeroni*.
- I'm an avid reader of Hacker News, and like following YouTube channels about software engineering, video games, cinema, and science.
- I participate in a local book club. I enjoy reading novels and science fiction in particular.

Language skills

- Italian: Native speaker.
- English: Professionally Proficient.