Samuel Henrique

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in https://linkedin.com/in/samueloph   ⌨ https://github.com/samueloph   🔻 https://salsa.debian.org/samueloph

Summary

- 10+ years of experience.
- Software developer, passionate about Open Source/Free Software, Linux, Debian, and security.
- Develops and maintains services and tools written in Python and Rust on AWS, deployed with TypeScript and CDK.
- Volunteer of the Debian project as a Debian Developer, doing .deb packaging, fixing CVEs, mentoring others. Contributed to Arch Linux, Fedora, and OpenSUSE as part of this work.
- Experienced .rpm packager on Amazon Linux, contributed to Fedora and CentOS as part of this work.
- Co-created wcurl 🔗 and contributes to many other projects, such as curl, rsync and nmap.
- Knowledgeable about build systems and a variety of programming languages, as a result of the Open Source/Free Software work.
- Team player, mentors newcomers to the Debian project, and trained the majority of the Amazon Linux organization in .rpm packaging and CVE fixing.
- Expert in Linux, scripting, and terminal tools, taught many co-workers.
- Experienced in assessing and fixing CVEs for both Debian and Amazon Linux, besides packaging of security tools.
- Dual nationality: Brazilian and Irish. Allowed to work anywhere in the EU and the UK. Holder of the USA B2 visa.

Skills

Languages: Python, Rust, TypeScript, Bash/Shell Script, Golang, C.

Software/Tools: AWS, Amazon Linux, Debian, AWS Lambda, AI, .rpm packaging, AutoGluon, AWS StepFunctions, Bash, Build Systems, CDK, CloudFormation, CloudWatch, Containers, CVE Assessments, CVE Fixing, CVSS, .deb packaging, Debugging, Docker, DynamoDB, EC2, ElastiCache, ElasticSearch, Free Sotfware, git, Grafana, IAM, Kibana, Machine Learning, Make, neovim, Open Source, PostgreSQL, RDS, Redis, Security, SQS, System Designing, tmux.

Experience

Amazon Web Services - AWS, Senior Systems Development Engineer (L6)   Dublin, Ireland
2018/12 - Present

- Amazon Linux Security Services and Tools.
- Develops and maintains Rust and Python services used for evaluation, triaging, and publishing of CVE data.
- Led and shipped a CVE Evaluation Service, back-end written in Rust with React front-end, the new service mitigated security threats from the old process, improved the speed by reducing amount of work required for evaluations, and solved accuracy issues due to bad data. Responsible for leading a team of 5 engineers, defining the milestones, distributing tasks, and doing development work myself. Led the project until completion, including going over Operational Readiness Review, Security Review and Pentesting.
- Designed and led the project that pioneered automated validation of CVE assessment data. Used Rust, Python, AWS Lambda and DynamoDB deployed with CDK on TypeScript. Split the tasks of the project between 3 co-workers.
- Designed a cross-team project that required coordination of both the back-end and front-end teams to provide more granular, per-repository, CVE evaluation data to customers. Involved a PostgreSQL schema migration and reaching agreements around the public facing change as it was a one-way-door decision. 5 different co-workers helped with the tasks.
- Designed and implemented a back-end change that allowed for CVE evaluation data to be automatically

pushed through internal systems and to a public endpoint, thus allowing all CVE evaluation data to go live instantly. Python service running on RDS with PostgreSQL (with a schema migration required) and deployed with CDK on TypeScript.

- Provided training and documentation for .rpm packaging and CVE fixing, recordings used across the whole organization to train more than 200 engineers. Covered handling of CVEs under embargo.
- Created a maintenance plan for the cryptography/security-related packages for the initial release of Amazon Linux 2023. Split the resulting tasks with 3 other co-workers and updated 25 packages. Ensuring there were no bugs shipped and making it easier to achieve FIPS 140-3 certification.
- Part of 3 company-wide v-teams: Open Source Champion, Security Guardian and Speaker-certified.
- Completed 5 Machine Learning/AI internal courses and competitions.
- As operational work, on a rotation: performs CVE assessments, defines CVSS scores, develop and ship CVE fixes for Amazon Linux's packages.
- Under a previous team: Implemented and designed an overhaul of the DDB data model used for a service. Followed a phased deployment approach. Event-based system using Kinesis, AWS Lambda, AWS StepFunctions, Python, SQS and DynamoDB.

Debian, Debian Developer
Remote
2016/09 - Present

- Manages the Security Tools Packaging Team ↗, handling security related packages and porting Kali Linux packages to Debian. The team is responsible for 310 packages ↗ (as of 2025).
- Maintains key-packages that are not part of the Security Tools Packaging Team; curl, rsync, shellcheck... https://qa.debian.org/developer.php?login=Samuel+Henrique ↗
- Responsible for patching packages written in: C, Python, Rust, Ruby. With required understanding of their build systems.
- Reviewed and signed 14 packages that are part of the Kubernetes project. Part of the "de-vendorized kubernetes Debian package" initiative that is being led by another Debian contributor.
- Mentors newcomers to the project, teaches .deb packaging. Reviewed and uploaded the first-contribution of 10 new contributors between 2024 and 2025. Was part of the process of 4 new Debian Developers between 2024 and 2025.
- Mentors more experienced contributors on how to fix CVEs on Debian, reviewed and uploaded at least 6 CVE-fixing packages to Debian stable between 2024 and 2025.
- Assesses and fixes CVEs (through backporting) from packages on all supported Debian releases, the most common case is curl which on average releases CVEs every couple of months. Includes processing and fixing CVEs that are under embargo.
- Enabled HTTP/3 support for curl on Debian, the first distribution to do so ↗.
- Helped organize Debian events: DebConf and MiniDebConf.
- Presented talks at Campus Party, MiniDebConf, DebConf, universities' events, CNCF Cloud Native Dublin meetup.

Google Summer of Code, Debian Mentee
Remote
2018/05 - 2018/08

- Project: Port Kali Packages to Debian
- Added 13 new Kali Linux packages into Debian, maintained under the Security Tools Packaging Team.
- Opened 10 pull requests against upstream projects on GitHub.
- Reported 5 issues against upstream projects on GitHub.
- Project report ↗

MadeiraMadeira, DevOps Engineer
Curitiba, Brazil
2016/10 - 2018/07

- DevOps for CentOS and Debian servers.
- Implemented Jenkins as a CI and CD tool for developers to use.

- Implemented the first deployment of Grafana used for monitoring, integrated with Zabbix, AWS CloudWatch and ElasticSearch.
- Designed and implemented a zero-downtime automated deployment system, triggered by git tags. Moved developers away from the old process of getting ssh access into a production server to manually trigger the deployment. The system relied on capistrano and was fail-safe against non-AWS outages due to a mirror of the GitHub repositories, also part of the project.
- Upgraded the infrastructure from Varnish 3 to Varnish 4.
- Created a central logging solution based on ELK and managed alerting systems based on AWS Cloudwatch, Datadog and Newrelic's APM.
- Created the Docker images used for the initial adoption for developer's environment setup and tests.
- Responded to incidents, prioritizing the quick recovery of the services.
- Managed a very dynamic e-commerce infrastructure at AWS which received high spikes during Black Friday.

Federal University of Technology - Paraná, IT Technician Intern   Curitiba, Brazil
                                                                                        2014/11 - 2016/10
- Deployed a library search engine containing all of the university's open data material, done using the VuFind project. Used by the whole university (including all campuses). Portal de Informação em Acesso Aberto ⤢.
- Contributed to the VuFind project on GitHub.
- Managed the OJS (Open Journal Systems) instance, used to host the scientific publications for the whole university (including all campuses). Portal de Periódicos Científicos ⤢.
- Contributed to the OJS project on GitHub.
- Identified a vulnerability in the way password hashes were stored in the journal system and fixed it for all accounts.
- Identified a security incident where the journal system website got defaced only for the Google crawler bot (hid the site from Google searches as impact).
- Identified a critical issue with the images used for the Debian servers across the university, result of a bad release upgrade process.

Federal University of Technology - Paraná, IT Technician Intern   Toledo, Brazil
                                                                                        2011/05 - 2012/12
- Supported all Windows and Linux machines, including labs of all departments.
- Planned and and deployed OCS-Inventory, integrated with Windows AD and GLPI, across whole campus.
- Customized and used GLPI as a helpdesk system.
- Learned Windows and Linux server administration: monitoring, auditing, management, deployments.

Education

Computer Engineering, Federal University of Technology - Paraná   2013 - 2018/did not
                                                                                        complete

Information Technology Technician, Federal University of Technology - Paraná   2009/01 - 2012/12