Fridolín Pokorný

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CONTACT INFORMATION

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EXPERIENCE

PerfSec.AI, ComplyHub.dev – CEO & Co-founder 2024 – present

CEO and co-founder of PerfSec.AI and ComplyHub.dev. Responsible for company direction and for some of the technical designs and decisions. Our mission is to provide secure, well-performing environments in compliance with EU and US regulations. We are providing secured, vetted, analyzed, and trusted software to our customers.

Contractor 2023 – present

Contractor at CloudLinux – helped with Python dependency management, Python dependency auditability, and incorporating security checks to software components.

Datadog 2022 – 2023

- **Senior Software Engineer – Software Integrity & Trust**

Participated in the initial database design, and implemented core parts of the SBOM Hub – an internal service for SBOM aggregation. Participated in TUF, in-toto, SLSA, GUAC upstream meetings, OpenSSF community meetings and applied related practices internally. Tested software related to Datadog's Python distributions that use TUF. Designed and implemented a new Windows Code Signing process that uses AWS KMS. Authored tools such as pipctl, Yorkshire. Helped to evaluate third-party vendors and their suitability for Datadog products.

Red Hat 2013 – 2022

- **Senior Software Engineer – Emerging Tech, Office of the CTO**

Implementation of the Thoth cloud-based Python resolver based on reinforcement learning, author of micropipenv. Interviewed, guided, and led new engineers and interns; provided technical guidance on theses for University students. Led internal process for publishing and releasing Python packages on a company-wide Python package index for internal and external use; co-authored or authored 16 patent proposals; five of which are active patents, three are pending, designed and implemented most of Dependency Monkey and Thoth backend. Presented work at conferences including NeurIPS 2020 or PyCon US. Collaborated with IBM Research, participated in Google's TensorFlow SIG build, and worked within Python upstream communities.

- **Software Engineer – OpenShift.io team, AI team, Office of the CTO**

Implementation of Python bots for managing application dependencies; analysis of packages in various ecosystems, mostly Java, JavaScript, Python, and Golang. Implementation of Selinon, which extends Celery with task flows for distributed computing. Selinon was run in OpenShift to gather raw data and compute additional dependency-related metrics in AWS.

- **Associate Software Engineer – Platform team**

Work related to RPM packaging of Golang projects, fixing bugs in low-level tools such as `less` or `tcsh`. Author of the `AF_KTLS` Linux kernel module providing the TLS/DTLS socket to user-space. The work was further extended through cooperation with Facebook and `AF_KTLS` was used as a base for the Linux kernel TLS socket, starting with vanilla Linux version 4.13 onwards. Module excels when transmitting data over TLS/DTLS where zero-copy optimizations can be applied.

- **Engineering intern – Platform team**

Developer experience team, helping develop the gofed tool for packaging Golang projects to Fedora.

AVG 2012 – 2013

- **Retargetable decompiler developer (RetDec)**

Implementation of C/C++ LLVM module in RetDec, focused on reconstruction of code blocks that are optimized by compilers (instruction idioms, optimization of standard C/C++ library functions) on different architectures (Intel, MIPS, ARM). The module outperformed the industry standard HexRays decompiler in reconstruction of optimized code. The work is still used in the open-source version of RetDec. Published related research papers in ComSIS and IEEE magazines. The module helped with malware analyses.

EDUCATION

Brno University of Technology – Master of Information Security 2013 – 2016

Ranked among the top 3 students in the study program.
Master thesis: *Linux VPN Performance and Optimization*; final grade: A

Brno University of Technology 2010 – 2013

Ranked among the top 12 students in the study program.
Bachelor thesis: *Reconstruction of Instruction Idioms in a Retargetable Decompiler*; final grade: A

HOBBIES

Football, road cycling, mountains, psychology, self-development.