Lorenzo Manacorda

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Skills

Fields of experience	Infrastructure as code – Observability – Functional programming – Formal verification
Tools and languages	NixOS – Terraform – Nomad – Kubernetes – Prometheus – Grafana – Nix – Go – Rust – Python – Ruby – Elixir
Communication	Italian (native) – English (advanced) – Spanish (advanced) – German (medium) – French (basic)

Experience

Symbolic Capital Partners — *Software Engineer (Freelance)*　　　　Jul. 2022 – Jul. 2024
- Refactored the company's Python-based observability infrastructure to increase reliability and performance, while reducing costs. Gathered requirements from different stakeholders, implementing a solution that worked across legacy and containerized infrastructure, and architecting a secure, modular and performant monitoring solution.
- Identified and fixed problematic Prometheus metrics
- Packaged proprietary and open-source tools with Nix, and provided assistance to other developers
- Created internal Nix packaging abstraction libraries
- Implemented a Nix-based CI workflow, using an S3-compatible binary cache, which improved developer productivity and software reliability
- Implemented PR security checks that integrated with GitHub workflow and prevented rogue commits from being deployed to production

Centrifuge — *Infrastructure Engineer (Freelance)*　　　　07/2021 – 07/2022
- Designed and implemented a declarative Kubernetes monitoring infrastructure using Jsonnet, allowing for fully reproducible, declarative, modular deployments of Grafana with dashboards, Prometheus with rules, alertmanager with alerts.
- Converted the manually-created GCP cloud infrastructure to use Terraform
- Packaged several components with Nix.
- Served as the company's point person for Nix, gave internal talks about it, and liaised with the wider Nix community

MakerDAO — *Smart Contract Engineer*　　　　2019 – 2020
- Worked on smart contracts for Multi-Collateral DAI, one of the leading stablecoins in the Ethereum ecosystem
- Worked on the company's Nix infrastructure: packaging, development of internal libraries, support for other team members

DappHub — *Formal Verification Engineer*　　　　2018 – 2020
- Formal verification of smart contracts for UniSwap, the leading decentralized exchange, using the K framework
- Developed and maintained the dapptools suite of free-software tools for smart contract development, written in Bash and packaged with Nix

Kinvolk — *Software Engineer*　　　　09/2016 – 08/2018
- Implemented in Go Kubernetes operators for clients, including Chef and Giant Swarm
- Added eBPF support to the WeaveScope monitoring tool

Meltwater — *Senior Software Engineer (Freelance)*　　　　02/2016 – 07/2016
- Moved a Ruby on Rails application to Docker, running on top of a Mesos cluster in Marathon
- Improved the resilience of a distributed transaction system using a microservices-based architecture
- Implemented frontend features using Redux, React and ES6

Viacom — *Senior Backend Engineer (Freelance)*　　　　01/2015 – 06/2015
- Moved our infrastructure to Ansible, increasing its repeatability, documentation and maintainability
- Led the effort for full-stack testing of the Ruby on Rails application: I analyzed the more vulnerable parts of the stack, suggested ways in which they could be improved and tested; I introduced several tools to the teams' toolbox: PhantomCSS for Visual Regression Testing, Capybara for Integration Testing, Jasmine and Karma for quick JS unit testing across browsers.
- I held a workshop on BDD (Behaviour Driven Development), and mentored other team members on best practices.
- I mentored team members on design patterns and best practices such as: SOLID, Presenters, Decorators, HATEOAS
- Maintenance of internal APIs and backend systems

SoundCloud — *API team intern*　　　　2014
- Worked on the Ruby on Rails REST API

Personal projects

- I'm enthusiastically involved in the NixOS community. I am:
  - ‣ a candidate for the firs-ever Nix Steering Committee;
  - ‣ a member of the RFC Steering Committee
  - ‣ a former member of the Documentation Team
  - ‣ a Nixpkgs committer and maintainer

- I developed nixpkgs-update-notifier, a bot that allows users to subscribe, via Matrix, to build failure notificaitons of the nixpkgs-update bot. The idea is to eventually upstream this into the bot itself, and one day add this functionality to the official CI of the NixOS project (Hydra) as well.

- try_elixir, an online Elixir REPL.

- Organized privacy workshops for activists, journalists.

Education

Master in Political Ecology, Degrowth and Environmental Justice — Universitat Autònoma de Barcelona   Sep. 2023 – Mar. 2024

BSc in Computer Science — Università di Bologna   2005–2010