

Gonçalo Pestana

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Brave
senior research engineer
12/2020 – present
Working on R&D through productization of privacy-preserving anti-fraud systems. Researching, designing and developing decentralized Ads infrastructure and privacy-preserving analytics for the web.

Brave
research engineer
5/2019 – 12/2020
Rust, Go, applied cryptography, solidity, Docker, AWS.

hashmatter
systems engineer
9/2018 – present
<https://hashmatter.com> R&D and consultancy focused on privacy preserving P2P networks and metadata resistant systems.
Golang, Rust, applied cryptography, P2P network design and development, libp2p, IPFS

NewThings Co.
Sr Software Developer
10/2017 – 9/2018
Backend developer and devops. I was part of the team helping the biggest bank in Finland to transition their services to the cloud.
Node.js, Golang, AWS, Docker, Serverless, Microservices.

F-Secure
Software Engineer
02/2016 – 10/2017
Backend developer responsible for architecting, implementing and maintaining a large data pipeline with highly concurrent data processing. I focused on architecting and maintaining complex distributed systems and microservices, on setting up and maintaining metrics and on the monitoring and alerting services. In addition, I developed and maintained multiple APIs and services for internal customers to access and process data.
Node.js, Python, AWS, Docker, Elasticsearch, Influxdb, NoSQL, Git, Devops, DC/OS, RabbitMQ, Serverless, Microservices.

Fivestars
Software engineer co-op
03/2015 – 09/2015
Designed, and implemented a company-wide metrics and analytics pipeline.
Python, InfluxDB, ELK stack (ElasticSearch, Logstash, Kibana), Grafana, statsd and Angular.js.

CERN

Engineer & Research
intern

06/20013 – 08/2014

Worked as a software engineer and researcher for the CMS collider software team. Developed test automation for data processing in microprocessors. Published and presented scientific paper at the ACAT2014 conference.

Python, C, ARM processors.

Software**consultant**

Software Engineer

08/2013 – 02/2016

Catchbox Oy

Worked as a full-stack developer and developed a product customization engine interface with server-side integrations. Worked partially remote.

Node.js, JavaScript, JQuery, CSS, HTML.

Eduze

Worked as a full-stack developer and developed a content cache running on constrained physical devices. The product was a success in DemoAfrica 2013. Worked partially remote.

Python, Flask, PostgreSQL, Javascript, HTML.

Open Source

sinkhole-rs Implementation of a Private Information Retrieval system (Rust)

elgamal-ristretto Efficient pure-Rust library for the ElGamal additive homomorphic encryption scheme using the Ristretto curve (Rust)

p3lib-sphinx Succinct onion routing packet format and protocol, for enhancing privacy of P2P networks (Go)

rdoc Conflict-free replicated JSON (CRDT) implementation (Go)

kapacitor-unit Unit testing framework automating kapacitor TICK scripts (Go)

p2psec Research on privacy and security in p2p and decentralised systems. Papers on anonymous DHTs (r&d)

the zen of data pipelines book on how to design, build and maintain data pipelines

Check <https://github.com/gpestana> for more projects and contributions

Skills

Languages	Go, Rust, Node.js, Python
Databases	Elasticsearch, Influxdb, MongoDB, Redis, PostgreSQL
Infra	AWS, Docker, Jenkins, DC/OS, RabbitMQ, Consul, IPFS, Dat
Paradigms	Decentralized web, Microservices, Distributed Systems, Agile, Remote

Education

Master's of Computer Science (2017)

Aalto University

Thesis title "Energy Efficiency in High Throughput Computing"

Publications: *Techniques and tools for measuring energy efficiency of scientific software applications*, in proceedings of 16th International workshop on Advanced Computing and Analysis Techniques in physics research (ACAT 2014)

Bachelor's of Network Communication engineering (2012)

Técnico Lisboa