

GIOVANNI MAGOGA

ma9o.github.io

WORK EXPERIENCE

CTO, Hangoo 🐙🐙

Dec 2020 - Apr 2021

Mobile app for meetups with social media based personality prediction. Developed MVP which helped obtaining 2k+ users and 700k\$ seed investment. • UI/UX with p2p [WebRTC](#) video calls, TTS and computer vision models ([tfjs](#), [Capacitor](#), [React](#), [Redux](#), [rxjs](#), [Typescript](#), [NextJS](#)) • Internal dashboard for user management and analytics ([Postgres](#), [PostGraphile](#), [PostGIS](#)) • Strongly typed [Phoenix](#) API using state machines, genservers and channels ([Elixir](#), [OTP](#), [GraphQL](#)) • Location and personality based matching engine ([Python](#), [sqlalchemy](#), [sklearn](#)) • Infrastructure management ([Digitalocean](#), [Grafana](#), [Dokku](#)) • Personality prediction and matching models R&D

Software Engineer, Passbase 🐙

Mar 2019 - Sep 2020

Joined as 1st full-time engineer and worked directly with the founding team (Stanford, Google, TUM) in growing the client base from 0 to 50+. Overtook previous CTO's responsibilities during the transition to new technical leadership. • Designed and implemented the first biometric authentication/authorization process ([OpenID](#), [OAuth](#), [DIDs](#)) • Refactored and optimized data model and internal [GraphQL](#) API ([Postgres](#), [SQL](#)) • Benchmarking and deployment of [MXNet](#) models and maintenance of data pipelines ([Redis](#), [S3](#), [tvm](#), [PyTorch](#)) • Refactored the MVP into SOA with strong typing, immutability and high test coverage ([Rails](#), [Sorbet](#), [rspec](#)) • Infrastructure management with [Ansible](#) and the Hashicorp stack ([Nomad](#), [Terraform](#), [Consul](#), [Vault](#)) • Technical sales, customer support and QA of outsourced work • Interviewing, mentoring and onboarding of new team members

OTHER PROJECTS

Stonkify 🐙🐙

Mag 2021 - Jul 2021

Frictionless securities market to incentivize discovery and funding of upcoming internet creators • Assembled a technical team through YC's SUS program • Built [Typescript](#) app using a [Nx](#) monorepo with [NestJS](#) [GraphQL](#) API and [NextJS](#) [React](#) frontend • Built agent based simulation of the market ([Python](#)) • Designed [Spring AMPQ](#) microservice interface for 3rd party order book matching engine ([Java](#), [RabbitMQ](#)) • Drafted an anonymization protocol for limitation of liability ([Monero](#), [I2P](#)) • Undertook market research and user acquisition (30 trial signups)

Delegated authentication over TLS 🐙

Nov 2020

Drafted a delegated authentication protocol for identity providers that do not implement [SAML](#)/[OpenID](#), requiring only TLS session tickets and AES bulk encryption • In depth study and experimentation with [AES](#) CTR mode, [TLS 1.3](#) and homomorphic encryption • PoC using [openssl](#) and Mozilla's [nss](#) and IBM's [homenc](#) libraries ([C++](#))

Curation market for Brave ads network 🐙🐙

Feb 2019

Substituted the random ads selection algorithm with a deterministic one based on a curation market • Modified and rebuilt Brave ([Chromium](#)) to natively interface with an [Ethereum](#) node ([Ninja](#), [gRPC](#), [C++](#)) • Implemented on-chain bonding curves with [Bancor](#) • Modified chrome extension to enable purchase and sale of tokens

Anonimized Aragon voting app 🐙🐙

Jan 2019

Added ring signatures to the voting dApp to conceal the identity of voters. The signatures are computed off-chain and verified on-chain. • Ring signatures in the browser from [Python](#) library transpiled into [C++](#) and compiled to [WebAssembly](#) • Optimized on-chain signature verification for the specific use case to reduce gas fees ([Solidity](#))

EDUCATION

BSc CS, Georg August Universitaet Goettingen 🐙

Oct 2018 - Mar 2019

Exchange year, attended MSc courses • Parallel computing ([CUDA](#), [OpenMP](#), [SLURM](#)) • Information theory and statistics • Data science ([PySpark](#), [sklearn](#), [seaborn](#), [NetworkX](#)) 🐙 • Category theory for programmers ([Haskell](#))

BSc CS, Universita degli Studi di Trento 🐙

Sep 2016 - Sep 2018

MISC

Interests economics, history, linguistics, AI, cinema, gliding, rts **Languages** Italian, English, German, Spanish