GIOVANNI MAGOGA

ma9o.github.io

WORK EXPERIENCE

Software Engineer, Facebook *Sep 2021 - Present*

Business Engineering team under the Metaverse Business Experiences program. Responsible for fostering adoption of AR/VR products by advertisers. • Responsible for the integration by 20+ customers of new server side tracking solution, resulting in >20M$/m of defended revenue. • Built data infrastructure and analytics dashboard for leadership to measure the business adoption of new AR advertising products. (Presto, SQL, React) • Enhanced media visualization in Commerce Manager for AR enabled products. (Hack, ffmpeg, Flux, Threejs)

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, Next.js) • 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 (Standford, Google, TUM) in growing the client base from 0 to 50+. Overtook previous CTO's responsabilities during the transition to new technical leadership. • Desiged 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 Next.js 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, Mozilla's NSS and IBM's homenc (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 in English and a few BSc courses in German.

BSc CS, Universita degli Studi di Trento *Sep 2016 - Sep 2018*