



Álvaro Carvajal Castro

BACKEND DEVELOPER

Profile

My name is Alvaro. I am a software developer mainly interested in back-end, cybersecurity and blockchain.

I am mostly interested on programming and weightlifting. I also like coding challenges (HackerRank and CodinGame mostly).

Experience

- Programming experience: C, PHP, Go, Rust, Elixir, NodeJS, Python.
- Extensive and battle-tested web security knowledge.
- Experience developing Blockchain applications. Solidity in EVM compatible chains including Ethereum, MATIC, AVAX or other chains like Zilliqa. L2s Like ImmutableX
- Database experience with MySQL, PostgreSQL, MongoDB, DynamoDB and Redis. Including data replication setups.
- Linux ecosystem in-depth usage and tooling (systemd, journal, cron, openssh, etc).
- Experience with AWS ecosystem (SES, SNS, S3, Cognito, Cloudfront, etc), Tecent Cloud and Akamai Cloud.
- Experience on serverless applications using AWS Lambda. Including API Gateway and DynamoDB.
- Networking experience with WireGuard, HAProxy, setting up Edge servers for CDNs.
- Virtualization using Proxmox, VMs, Linux CTs (LXC).
- Payment processing using Stripe, Paypal, PIX, Ebanx.

Employment History

Software Developer, ttime.app

2022 - Present

Remote team synchronization tool. Time manipulation using the IANA timezone database. Parsing and updating. Shapefile parsing for timezone lookup based on coordinates. Backend running on PHP Laravel 10, Timezone lookup using Go.

Handling real-time geo-location updates for more than 5000 users.

Lead Blockchain Developer, Tavernlight Games

2019 - Present

Leading blockchain development for the P2E MMORPG RavenQuest. Full website backend integration made in Go with full EVM compatible integration (minting assets, tokens, assets sale and faucets). Full integration running on Polygon (MATIC).

Made smart contracts for land sales, NFTs, ERC20 tokens, handled more than 300.000 USD in transactions. Implemented custom NFT and token ownership model allowing users to quickly transfer ownership of their assets to between in-game and the blockchain.

Software Developer, Insta Container Modifications

2020

Full development of front and backend infrastructures for multiple in-use services, from web portal, sales portal and reseller portal. Billing portal integrated with Stripe, handling real-time shipping calculation using UPS and DayAndRoss APIs. Handling more than 100.000 monthly requests.

Software Developer, Living Phoenix Entertainment

2018

Working on the MMORPG Ravendawn Online. Implementing backend services for public facing applications (website, forums, email delivery), handling more than 1 million monthly requests. Full integration with Twitch API for streamer rewards, implementing campaigns using drops with more than 45.000 viewers.

Implemented multi-source database replication for MySQL with automatic failover.

Education

Master of Cybersecurity, Universitat Oberta de Catalunya

Master thesis: Ethereum mixer using ECDSA signatures. PoC showing ECDSA validation for access based actions in smart contracts.

Bachelor in Computer Science, Universitat Oberta de Catalunya

Bachelor thesis: Exploitation and prevention of vulnerabilities in web applications. Small guide document going through some of the most important vulnerabilities on the web space.