Michał Flak

michal@mflak.eu · mflak.eu · linkedin.con/in/mflak · github.com/elo-siema

About

Software engineer with over 6 years of experience.

Experienced in backend development, cloud and leading a small team of engineers. Recently working with blockchain.

Education

University of Strathclyde	Glasgow, Scotland
BA Product Design and Innovation	Nov 2015 - Jun 2016 (decided to switch to CS)
AGH University of Science and Technology	Kraków, Poland
BEng Computer Science	Nov 2017 - Jun 2022 (ongoing, part-time)

Experience

Monadical	Remote
Senior Software Engineer	Nov 2021 - Present

- Integrating Solana with OpenSea NFT exchange
- Worked on a large-scale ETL ingestion pipeline of Solana transactions, mostly Python
- Worked with Metaplex smart contracts, contributed to MPL
- Learned to develop Solana programs in Rust / Anchor

Stats Perform	Remote
Software Engineer	Nov 2020 - Nov 2021

- Project summary: Modernizing and migration of ~60 .NET desktop and web applications from on-premise datacenter to AWS
- Worked with a team of initially 15, later 5 highly experienced engineers
- Cleaned up, modernized, debugged and containerized ancient C# and VB codebases
- Created internal use NuGet packages for publish / CI and for Auth0 integration with desktop clients
- Created AWS infra in Terraform, deployed applications on Windows Kubernetes clusters
- Overhauled the security model of web services, moved from in-house to Auth0 + API Gateway
- Set up CI in Jenkins, producing Docker images, app installers and code quality / vulnerability reports
- Troubleshooted networking across various AWS components and on-premise datacenter
- Collaborated with multiple stakeholders across teams in a large organization
- Created extensive technical documentation

Betsold Ltd	Remote
Lead DevOps Engineer	Dec 2018 - 2020

- Tasked with setting up CI/CD pipelines and scalable infrastructure in AWS for our auction platform (F/E, B/E, misc. supporting services, monitoring, alerting). Still continued development alongside that.
- Managed a team of 4 remote DevOps and Cloud engineers
- Carried out integration tests with 3rd party company system
- Monitored and optimized costs of the cloud infrastructure
- Managed the release process, versioning and deploying
- Conducted a successful product launch

Betsold Ltd	Glasgow, Scotland / Remote
Software Engineer	July 2016 - Dec 2018

- Joined in early stages of a sports betting auction startup as a second developer on the team, saw its growth and journey to launch

- Developed auction API in C# / Asp.NET Web API + SQL procedures
- Worked on a live update system for auction bids over websockets, F/E + B/E

Twenty Squares Ltd   Remote
Project Manager / Software Engineer   July 2018 - October

- Worked with a Junior Developer on a redesign / overhaul of a climate change educational game for Scottish primary schools
- Built content structure and presentation templates in Umbraco CMS
- Built a 3D "voxel" - based game using the PlayCanvas engine (Javascript / WebGL)

SKILLS

Tech - Professional:

- Languages: Python, Rust, C#, Javascript, Terraform, SQL, Powershell, bash
- Cloud: AWS - deep experience, Terraform, Kubernetes
- Others: Jenkins, GoCD, Docker, Redis

Tech - Hobby / Academic:

- Languages: Rust, C, Matlab/Octave, R
- Others: ML experiments with FastAI library

SELECTED PERSONAL PROJECTS

Hyperbolic Raycaster *Rust, Webassembly*   https://github.com/elo-siema/hyperbolic-raycaster-rust
Experiment in non-euclidian geometry - 2.5D Doom-like game engine taking place on a hyperbolic plane. Became my engineering thesis.

Chip8 emulator *Rust*   https://github.com/elo-siema/rust-chip8
Simple game console emulator written in Rust as an exercise.

6onode *Javascript*   https://github.com/elo-siema/6onode
Alternative multithreaded client of a popular online chat service (websocket-based). Reverse engineered the communication protocol from obfuscated Javascript and with the help of Wireshark. Automatic switching of VPNs for new conversations.

Centipede *Javascript*
Emulator of an arcade game Centipede by Atari. Used an existing JS emulator of MOS6502, wrote the remaining bits (graphics, memory mapping, I/O). Uses the original game ROM dump. Created as a recruitment task.

COURSES

Machine Learning Coursera by Andrew Ng
Exercises in Octave.