ADAM HOMOLYA
Software Engineer

📞 +36 30 728 1978
✉ adam.homolya@gmail.com
🏠 https://aalmos.github.io
in https://www.linkedin.com/in/ahomolya/

INTRODUCTION

I'm an enthusiastic software person with 6 years of professional experience and 10 years in total with software and internet applications.

I'm interested in large scale computer systems and in general in complex problems, that involve some scientific studies or reasoning beyond bare coding. In most of my jobs so far, I've been dealing with high-demand server-side applications and the related technical infrastructure. I can confidently say I'm quite familiar with both the corresponding programming and operations trends and practices. In my free time, I'm actively learning about Data Science and Machine Intelligence, and I also think myself to be a functional programming geek.

Career wise I'm looking for roles with increased responsibility and high impact on products and services that I really believe in. I'd also welcome opportunities where I can get exposure to projects with Data Science or Machine Learning aspects.

WORK EXPERIENCE

Lead Software Engineer
Nov 2016 – Present
NeocoreGames, Budapest

Currently working at NeocoreGames as an engineering lead for our online services department, leading a team of 4 people.

Having **full ownership over our online platform** for gaming services and I have a key role in making decisions over technologies and third-parties to work with.

Orchestrated the transition to cloud-based solutions (Amazon ECS) from a self-hosted approach, and successfully released our latest title on Steam with the new backend. We implement most of the server-side business logic in NodeJS and use MongoDB as a database.

Volunteered to carry out an extensive reform on the ways the company ships software. Migrated the entire codebase (Mainly C++) to Git, set up automatic multi-platform builds and tests, introduced proper issue tracking. With these we managed to significantly reduce bug rates and were able to set up an iterative release cycle

Senior Software Engineer
Jul 2016 – Nov 2016
Flynt, Zürich

Worked as a contractor for Flynt, a startup bank in Switzerland, exclusively for super-rich individuals. We used the Scala/Akka stack along with Cassandra and MySQL for building a banking engine from scratch. Projects as follows.

Authentication System (full responsibility). Designed, developed and delivered software implementing the 3-way authentication process of Flynt (Scala web application).

PKI Services. Developed client certificate and key management system as EJBCA plugins (written in Java).

Deployment System. Due to lack of workforce, joined the Operations team. Wrote management scripts and numerous Ansible roles to automate the deployment of our software stack via VMWare vSphere.

Software Engineer
Dec 2014 – Jul 2016
Activision, Dublin

Worked in the Platform Services team of a subdivision called Demonware. Developed a shared service platform (Erlang and Python) along with the related software backends for AAA online gaming (470 million users, 300K requests/s). Some notable projects as follows.

Service Discovery for MySQL (full responsibility). Designed a way of mapping MySQL replica sets to human readable identifiers. Developed a background service that automatically configures HAProxy to route services to the appropriate machines holding the corresponding data. The mappings were stored in Zookeeper and could be updated in real-time with zero downtime using an admin console.
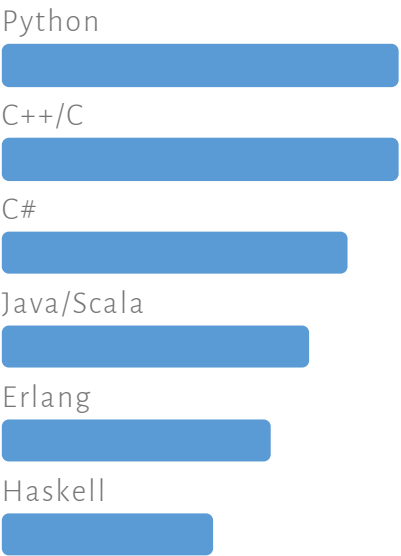
Backpressure (full responsibility). The project was to employ a control mechanism between the load balancer and the internal service endpoints to slow down request rates and perform seamless retries if needed, so that our users experience better overall service quality.

Matchmaking. Worked on a service that matches players together in real-time, based on their stats. Developed the timeout system and the service monitoring. Made research on optimization algorithms for solving the problem (clustering, fuzzy-search, space partitioning).
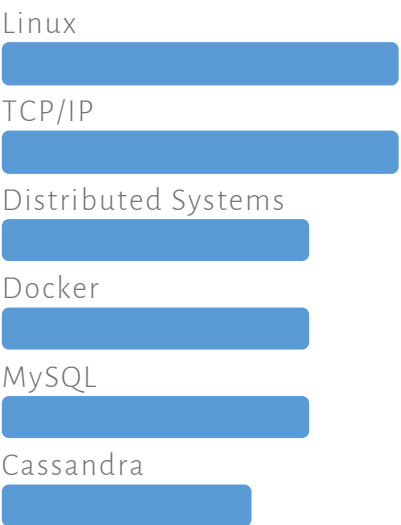
Erlang Bytecode Encryption (full responsibility). Developed an encryption/obfuscation mechanism in the Erlang compiler and modified the VM to be able to execute the encrypted bytecode.

PROGRAMMING LANGUAGES

Python

C++/C

C#

Java/Scala

Erlang

Haskell

OTHER TECHNOLOGIES

Linux

TCP/IP

Distributed Systems

Docker

MySQL

Cassandra

INDEPENDENT ACTIVITIES

Co-Founder
blex.io

Co-founded Blex, a blockchain engineering and investment company in Hungary. Being mostly a passive member, doing occasional research on blockchain-based technologies, evaluating mining hardware and hunting for clients from around the world.

Open Source Contributions
PvPGN Community

Contributed to the PvPGN battle.net server emulator application during high school and early college years. Ran a successful custom PvPGN server kani.hu that used to have tens of thousands of monthly active users between 2007 and 2011.

Software Engineer

LogMeIn, Budapest

Developed a cloud storage solution similar to Amazon S3. The software had two main layers, a fronted that manages user data and exposes a user-facing REST API (ASP.NET, C#, Cassandra), and a backend that allows CRUD operations on data blocks distributed on a cluster of machines (C++, C#). Developed the backend layer with a team of 4 engineers. The key idea behind the storage system was to achieve redundancy through the RAID-6 algorithm instead of replication like most other solutions do. Some responsibilities as follows.

PoC-ing and research. Researching libraries, file systems and algorithms to use. Creating PoC software, performing benchmarks, summarizing and comparing them, documenting results.

Design and Development. Designed the CRUD API for the data block storage using a subset of HTTP. Wrote several internal software components in C# and C++ with a focus on doing proper async IO and maximizing disk performance.

Mentorship. I had the opportunity to mentor some of my colleagues coming from a C++ background in the C# and .NET world.

Software Engineer

Libri-Bookline, Budapest

May 2012 — Aug 2013

Started to work for Bookline as an undergraduate. Worked with a team of developers on the in-house ERP system of the company, a C++ desktop application with a central MSSQL backend.

The main task was to do a transition of components to open source alternatives. Ported the formerly Windows-only desktop application to Linux. Migrated the MSSQL database and stored procedures to Postgres. Factored out much of the business logic to several smaller Python scripts.

EDUCATION

MSc in Computer Science
Eötvös Loránd University

2013 - 2014

BSc in Computer Engineering
Pázmány Péter Catholic University

2009 - 2013

RECOMMENDATIONS

Adam gave exceptional contributions to our data warehouse system. Despite his former C++ and Unix background, he caught up the .NET ecosystem to a near expert level within a short time, sometimes even mentored his team on the topic. He was able to build top quality software, meeting both our performance and quality requirements while having a keen eye on building robust system architecture and meeting deadlines.

Krisztián Kopasz
VP of Engineering

I had a great time working together with Adam. While he is a rockstar developer, he also is an excellent person with a great sense of humor. He has a great curiosity for new ideas and plenty of common sense. I'm looking forward to working together with him again.

Péter Sághelyi
Software Architect