Ákos Nagy

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Work Experience

Chief Technology Officer	IP Camp Gmbh.	November 2017–Present

Budapest, Hungary and Ingolstadt, Germany
40 employees in Hungary, 30 employees in Germany
Software development

- Designed and implemented a **domain-specific language** for formalizing requirements and test specifications using **ANTLR, Java, Python** and **Rust.** Automatic verification of software components, proof of concept validated in several automotive and aerospace industry use cases
- Explored the use of **generative AI** (llama, OpenAI) to convert informal/natural language requirements into formal specifications and program code
- Led a team of 12 to develop a lightning fast **trace/signal analytics platform** for automotive root cause analysis using **Java, SpringBoot, Angular, InfluxDB, Grafana and Electron**
- Implemented **Azure IoT** infrastructure, **Angular** frontend and **C#/ASP.NET core** backend for **Central Battery Monitoring** system, used globally in warehouses to optimize charging and supervise maintenance of electric forklifts
- Led hands-on development of a highly modular and configurable **Battery Management System** for prototype electric and hybrid vehicles using **embedded C.** The platform shortened the prototype development phase, the customer was able to adapt the system for new vehicles within a few days
- Lead a team of 5 to develop an IoT sensor data collection and storage for **Industry 4.0** application, using **Timescale (PostgreSQL), Grafana, Docker, React, Golang, RabbitMQ** and **K8s**
- Managing a team of **40 software engineers**, through 7 **engineering managers** and **team leaders,** overseeing their professional development through performance reviews, mentoring, and ongoing support
- Working with **product managers** to transform customer requirements into *user stories* and *development tasks*, finding the best technology stack for their problems

Software Development Team Leader	NNG LLC.	2013–2017

Global Custom Solutions Business Unit   Budapest, Hungary
500-1000 employees, automotive software development

- Led a team of 8 engineers and coordinating 10+ internal and external suppliers to develop the company's first **truck navigation system** for one of the biggest vehicle manufacturers
- As a member of the **architects board**, I played a key role in overseeing the design of the new **modular architecture** and public APIs. Additionally, I led the efforts on **POSIX/Linux** and **Android/iOS** ports of the old, Win32-oriented code base
- As an active **hiring manager**, I successfully led hundreds of technical interviews, with a focus on evaluating candidates' proficiency in **C++, algorithms, and data structures**. Implemented innovative interview techniques to ensure thorough assessments of candidates' technical skills
- Managed a team of **25 software engineers**
- Collaborated closely with **project and product managers**, leveraging a customer-centric approach to understand requirements and determine optimal technical solutions

Lead Software Engineer	**Labtech Kft.**	**2010–2013**
PC-based ECG systems	Debrecen/Budapest, Hungary	

20-25 employees, healthcare software development and medical device manufacturing

- Led an engineering team of 5 to develop PC-based Resting, Stress and Holter ECG systems in **C#.NET** for **Windows**, successfully replacing old, C++ based solutions with customer satisfaction: increased performance, modern look and feel, modular architecture
- Created the world's first fully functional resting ECG solution for **Windows Mobile**, later ported to **Android** and **iOS** based smartphones and tablets using **C#, .NET Compact Framework** and later **Xamarin**
- Worked directly with **customers** to implement tailored PC-based and mobile ECG solutions, ensuring alignment with their specific requirements. My efforts were instrumental in the company's expansion beyond Hungary, enabling successful entry into highly competitive markets in **Germany**, **Japan**, and **China**.

Software Developer	*Freelancer*	**2004**-**2010**

Various short-term contracts to finance my studies

- 2D and 3D game and game engine development in C++ for Windows PC, various gaming consoles and smartphones
- Developing indie video games for Windows PC, Windows Mobile and later iOS, Android
- Implementing algorithms in C/C++ to analyze ECG and blood pressure on Windows PC and embedded microcontrollers
- Developing iOS apps for various companies: newspapers, magazines, festivals

Education and Certifications

- **MSc. Computer Science,** Eötvös Loránd University of Science, Budapest, Hungary.   **2013**

Technologies and Languages

- **Languages**:   Golang, Python, Typescript, Java, C#, C++, C, Rust
- **Technologies**:   Azure, Postgres, MongoDB, ASP.NET, SpringBoot, Angular, React, Git
- **Other**:   Data structures and algorithms, low-level code optimization

Projects

- **Free Ascendancy -** Remake my childhood favorite 4X strategy game, Ascendancy in Python
- **Fun with compilers -** Compiler and parser construction course for team mates.

Languages

- **English:** professional working proficiency
- **German:** basic understanding
- **Hungarian:** mother tongue

Interests

- I spend a fortune on hard rock and heavy metal concerts. I'm also a regular visitor of the Budapest Jazz Club
- I have read most sci-fi novels, watched most sci-fi TV shows and movies, although not all of them did worth the time
- Used to be an avid, competitive gamer, but nowadays only play occasionally on my Steam Deck
- Training A Cat and The Dog - much more successful in the latter. Doctor Cat is more useful on hard days though