

## Adam Luzsi | CV | the course of my life

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Hello! I'm Adam Luzsi, an IT professional with a keen interest in maintainable software development. My skills encompass several programming languages, notably Go (6+ years), Ruby (7+ years), but also gained experienced with C#, JavaScript/TypeScript, and a bit with Java and PHP.

I've applied these competencies across various industries such as finance, marketing, second-hand marketplace, healthcare, and insurance, bringing effective software solutions to complex problems. An essential part of my career is being a dedicated open-source contributor and a lifelong learner. Please check out my GitHub profile for more about my work and contributions.

I see myself as a Senior Software Engineer, and some may categories similar expectations as a Principal SE or Staff SE, I find that these titles can vary significantly in their interpretation across different companies. Therefore, I prefer not to place too much emphasis on them.

This summary should give you a good overview of my experience and capabilities, and the rest of the document provides more detailed information if you're interested.

### My current open-source software projects:

- frameless | anti-framework for system flexibility and maintainability
- rack-app | a minimalist ruby web framework
- testcase | test-driven designing a toolkit for Go to support classicist TDD testing
- toggler | a self-hosted feature flag and a release management service.

### Reference links:

- Github profile
- RubyGems profile
- My presentation from UK GopherConf about the misunderstood HR tool: Microservices Architecture

### Employment Timeline

Year Range	Position	Company
2009 - 2011	Software Development Intern	CFB Kft
2011 - present	Open-Source Contributor	GitHub Link

Year Range	Position	Company
2011 - 2014	Software Engineer	People Process Technologies
2014 - 2016	Software Engineer	VeryCreatives Consultant
2014 - 2018	Software Engineer	Emarsys-Technologies Kft.
2018 - 2019	Senior Software Engineer	Cembra Money Bank
2019 - 2022	Senior Software Engineer	Tutti / Tamedia / Swiss Marketplace Group
2022 - 2023	Senior Software Engineer	Teya / SaltPay

## Expertise

In software development, I've had the privilege of working with a wide range of **programming languages**, such as **Ruby**, **Golang**, **C**, **Java**, **C#**, **JavaScript**, and **PHP**. These experiences have allowed me to navigate diverse environments, from **backend** to **client-side**, **web development**, and **microservices**, utilising various **frameworks**.

When designing software, I meet human needs and strive for simplicity amidst complexity. I am well-versed in applying **principles** like the **12-factor methodology**, **SOLID principles**, **Hexagonal architecture**, and **Clean Architecture** to empower developers and enhance maintainability while considering human cognitive constraints.

**Automated testing** is a must for me. I firmly believe in practices like **Test-Driven Development (TDD)**. When I lacked the required tooling to achieve high-quality, modular, and easily maintainable automated tests, I invented it myself. Whether working on professional projects or pursuing my ones, I always apply this level of thorough testing.

Being part of the **open-source community**, I cherish the idea of mutual learning and collaboration. It's an environment where I learn, contribute, and actively support others, especially in testing, by sharing my knowledge and experiences.

In terms of **data management**, I have successfully handled an array of **databases**, including **PostgreSQL**, **MySQL**, **BoltDB**, **Redshift**, **GreenPlum**, **Google BigQuery**, **Redis**, and **Kafka**, and I have expertise in designing efficient **ETL data pipelines**.

My experience extends to **API design**, where I have worked with different stacks like **RESTful**, **GraphQL**, **gRPC**, and **SOAP**.

As part of my ongoing learning journey, I gained comprehensive experience in fostering the growth of both team members and independent individuals, nurturing their professional and personal advancement through **mentoring**. Sharing knowledge and supporting others has been a rewarding aspect of my career.

**DevOps** has been a crucial part of my professional journey, involving implementing, managing, and scaling applications. Through this experience, I have recognised the value of cross-functional workflows between teams. I have utilised tools such as **OpsGenie**, **PagerDuty**, and **Pingdom** for on-call duties to ensure prompt response and resolution.

Adding to my DevOps skills, I have extensive experience hosting applications on different platforms, including **AWS Amazon Web Services**, **Google Cloud Platform**, **DigitalOcean**, and **on-premise** environments. My proficiency extends to tools like **ArgoCD**, **Docker**, **Terraform**, and **Ansible**, bolstering my capabilities in orchestrating and automating deployment processes.

My understanding of **agile methodologies** has been enriched by active involvement in practices such as **Scrum**, **XP**, and **Agile Development**. Embracing these methodologies has enabled me to deliver high-quality software solutions collaboratively.

**Security** is an aspect of IT that I deeply respect, and I have proactively sought to enhance my application designs through a foundational understanding of **ethical hacking**. My knowledge in this area stems from online courses and mentorship from a **Security Expert** when I worked at **Emarsys Technologies**.

### Domain knowledge

I have also had the opportunity to showcase my leadership capabilities by leading a small team for several projects, further honing my organisational and communication skills.

My professional journey has led me to work in diverse industries:

- In the financial sector, I gained valuable insights into payment systems, acquiring hosts, and financial regulations during my tenure at Teya (Salt-Pay).
- I leveraged technology to streamline tasks and automate marketing workflows within the marketing industry, providing customers with valuable insights into their revenue streams while working at Emarsys.
- Additionally, I delved into data warehousing and ETL processes as a member of their Historical Data Service team.
- During my time at People Process Technology, I had the valuable opportunity to acquire knowledge and skills in working with workflow engines and addressing technical requirements associated with healthcare data.
- At Tutti.ch, I contributed to enhancing a thriving second-hand marketplace, optimising user experience and streamlining transactions.
- At CFB Kft, I learned about the complex policy systems of the insurance sector and participated in the design of compliant insurance software solutions.

I am grateful for the diverse and comprehensive knowledge I have gained throughout my career. I am enthusiastic about utilising this experience to create effective

software solutions across various industries.

## **Education & Professional Development**

- Web Software Developer (OKJ nmb 54 481 02): Completed an intensive course on developing web-based software solutions—acquired skills in various programming languages, web development frameworks, and database management systems.
- Client-Sided Software Developer (OKJ nmb 54-481-02): Gained in-depth client-side programming knowledge.
- Apprenticeship & Mentorship: Participated in an apprenticeship program followed by a mentorship, further solidifying my software development skills. Gained practical, hands-on experience and received personalised guidance from experienced professionals in the field.

## **Language Proficiency**

- English: Proficient in English, both written and spoken. Regularly utilise English professionally, demonstrating effective communication in cross-cultural teams and with international clients.
- Hungarian: Fluent in Hungarian - Native speaker.

## **Portfolio**

This list contains a few projects from my experience:

### **Open-Source Software - Testcase**

To ensure maintainability and flexibility in my Golang projects, I incorporated key elements from various frameworks to create a powerful and adaptable testing suite. The framework empowers the creation of modular, reusable components and facilitates a classicist TDD testing strategy. It simplifies test setup and teardown, eliminating the need for extensive stubs or mocks. This enhances code trustworthiness and enables the reusability of test helpers. Developers can leverage these benefits by using the framework.

### **Open-Source Software - Frameless**

I have conducted extensive research on software design idioms, particularly focusing on the Hexagonal architecture's port idiom. This allows me to provide valuable guidance on software design. As part of this project, I developed modular and reusable consumer-driven contracts. These contracts played a crucial role in enhancing the work of my team at Teya. They facilitated smoother collaboration and improved the overall efficiency of our development process.

### **Open-Source Software - Toggler**

I'm working on a feature management platform that enables companies to easily manage rollout without being tied to expensive proprietary software. The platform is open-source and designed for scalability. We prioritize comprehensive documentation and rigorous testing to ensure reliability and flexibility in the system's implementation. I'm actively working on this, but as a side effect of this project, the frameless anti-framework born, along with the testcase testing library.

### **Open-Source Software - Rack-App**

I developed a minimalistic framework for educational and production use. The project focused on deepening my TDD/BDD knowledge and involved practicing heavy refactoring, which was facilitated by comprehensive tests. The framework I developed received recognition from my peers at the current company and was successfully deployed in real-life applications. Within the company, the project served as a demonstration of the Rack project and was utilized for the rapid development of small HTTP web microservices.

### **Emarsys - Historical Data Service**

In a collaborative trio team, I played a key role in designing and building scalable solutions for storing and analyzing big data. Our main project centered around enhancing the data warehouse through continuous improvements. We also worked on replacing legacy solutions with more practical alternatives. We successfully enhanced the Behavior information query service, a vital component for the company. As a result, the service's performance improved significantly, becoming approximately 800% faster. This optimization not only made it much quicker but made room for new features building on top of it.

### **Emarsys - Escher Auth**

I maintained Ruby and Golang client libraries, focusing on expanding test coverage and reducing dependencies. I successfully resolved multiple bugs that were impacting the company's productivity. As a result, the integration time for Ruby and Golang projects significantly decreased from a week to just mere minutes.

### **Emarsys - Smart Insight**

As the developer of Smart Insight, I contributed to build and maintain the data-driven solution that transforms raw data into actionable insights. Smart Insight uses advanced algorithms to segment customer data based on predicted behaviors, enabling targeted marketing strategies. It also provides real-time analysis and data visualizations for each customer segment, offering a powerful tool for customer engagement and business growth. The technology stack

predominantly comprised Ruby as the high-level language, Rails for the web application, and GreenPlum, a distributed big data database engine for storage.

#### **People Process Technology - Foton Engine**

As the Lead developer, I designed and implemented a versatile solution using a workflow engine, prioritizing maintainability, reusability, and testability. Additionally, I managed a small team responsible for the project's backend. As a result of the implemented solution, the company achieved increased integrations between existing microservices and gained additional government projects. These new projects required minimal UI and UX investment. Furthermore, the workflow engine was reused to develop smaller microservices, which were orchestrated using the Foton engine. These microservices acted as participants in the workflow engine, functioning similarly to an integration bus.

#### **People Process Technology - Lepton Engine**

As a Lead Developer, I spearheaded the design and facilitated the implementation of an innovative internal payment handling system, known as the Lepton Project. This system utilized a virtual currency mechanism, enabling employees to manage and request benefits from their companies. This project showcased my ability to create effective and user-friendly solutions that streamline internal processes and enhance employee engagement. The outcome of the Lepton Project was a robust and efficient system that was adopted by the Hungarian Government. This system was used to manage benefits and handle travel expenses for their employees. The successful implementation of this project demonstrated the practicality and effectiveness of the virtual currency mechanism

, significantly streamlining the process of requesting and managing benefits. This not only improved operational efficiency but also enhanced the experience for the government employees.

#### **People Process Technology - Project Healthcare Tourism**

I spearheaded the development of an advanced booking engine, a pivotal solution for scheduling appointments related to healthcare products. Our team was committed to implementing stringent security measures in line with industry standards. Thus, we stored all patient related data in the GT.M database in an encrypted format, mirroring the practices of leading healthcare companies in the United States.

For the implementation of the necessary queries, we utilized the M language, renowned for its efficacy in managing multi-dimensional databases. The booking system's design was realized through the Ruby high-level language, celebrated for its versatility and readability, which ensured our solution was robust and maintainable.

### **Cembra Money Bank - ZEK Integration**

Service owner of the ZEK integration (Zentralstelle für Kreditinformation) plus leading the legacy solution's replacement project implementation. Additionally, I facilitated communication with teams involved in outsourced projects related to this system. I proactively reverse-engineered and fixed the code, enabling the replacement of the legacy system. This improved efficiency, received continuous awards from management, and eliminated daily incidents. The project's successful transition freed the bank from the burdens of the legacy application.

### **Tutti / Tamedia - Extending Payment System in the Blocket Platform**

I analyzed and reverse-engineered the payment flows in the company's complex legacy system, which was rarely approached by others. Additionally, I extended it by adding a new payment option. Through my efforts, I identified and resolved hidden issues within the payment system, resulting in a modest increase in average revenue. Furthermore, I successfully integrated TWINT into the legacy system, which surprisingly led to a substantial boost in revenue. Users showed a strong preference for this new payment option over others.

### **Tutti / Tamedia - TX Advertisement Integrations**

My role was to fix the legacy integration solution that lacked tests and any form of maintainability. The mother company was changing its approach to advertisements, so the tracking integrations had to be revisited to give more power to the Marketing Agents. The final outcome allowed easy maintenance and the field agents could use advanced targeting to find the right customers for better lead generation.