Gábor Monostori

Profession
Full Stack
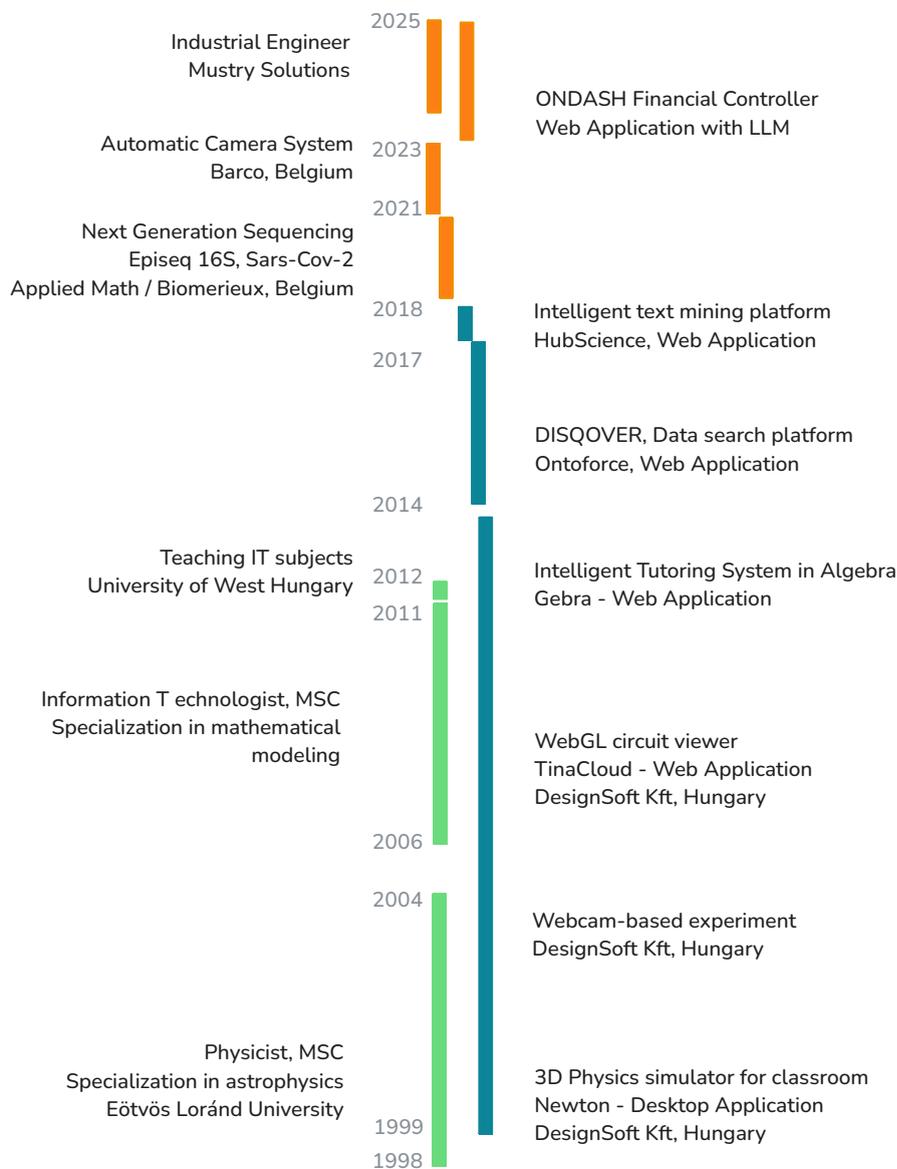
Born
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2025

Industrial Engineer
Mustry Solutions

ONDASH Financial Controller
Web Application with LLM

2023

Automatic Camera System
Barco, Belgium

2021

Next Generation Sequencing
Episeq 16S, Sars-Cov-2
Applied Math / Biomerieux, Belgium

2018

Intelligent text mining platform
HubScience, Web Application

2017

DISQOVER, Data search platform
Ontoforce, Web Application

2014

Teaching IT subjects
University of West Hungary

2012

Intelligent Tutoring System in Algebra
Gebra - Web Application

2011

Information Technologist, MSC
Specialization in mathematical
modeling

WebGL circuit viewer
TinaCloud - Web Application
DesignSoft Kft, Hungary

2006

2004

Webcam-based experiment
DesignSoft Kft, Hungary

Physicist, MSC
Specialization in astrophysics
Eötvös Loránd University

3D Physics simulator for classroom
Newton - Desktop Application
DesignSoft Kft, Hungary

1999

1998

Competencies

Design

- API Design: REST, GraphQL, gRPC/RPC
- Design Patterns: GoF (creational, structural, behavioral), SOLID, DI/IoC
- Architecture Patterns: microservices, monolith, event-driven, CQRS, hexagonal/ports-adapters, serverless
- UX Design: wireframing, prototyping (Figma)

Front end

- Frameworks: React, Angular, NiceGUI (Python), Vanilla JS
- State Management: Zustand, RxJS, Apollo Client
- Data Visualization: WebGL, ECharts, D3.js, Chart.js, Plotly
- PWA: installability, offline capabilities
- Micro-frontend: Module Federation (Webpack 5)

Back end

- Languages: Python, Go, TypeScript
- Testing, TDD: pytest, unittest, Jest
- Workflow orchestration: Airflow
- AI/ML: LangChain, OpenAI API
- Messaging: Redpanda, RabbitMQ, MQTT (Sparkplug B)

Data

- ETL: Airflow, Pandas
- Databases: PostgreSQL, MongoDB, OrientDB, Redis, InfluxDB, TimeScaleDB
- Knowledge Graph: RDF, SPARQL

DevOps

- Cloud: AWS (EC2, S3, Lambda, ECR, ECS, Firehose, Kinesis, Cognito)
- CI/CD: Git, GitHub Actions, ArgoCD (GitOps), Jenkins
- Containers: Docker, Docker Compose, Kubernetes
- Monitoring: Prometheus, Grafana

Industry Experience

- Manufacturing: SCADA/HMI, MES, OPC, historian systems
- Life Sciences: next generation sequencing, knowledge graphs
- Fintech: workflow automation, document processing
- Education: simulation software, math/physics learning tools

Work History

Mustry Solutions [April 2024 - Present]

Project: Manufacturing automation

Role: Data Engineer

Tech Stack: python microservices, Kubernetes, Docker, Kustomize, Helm, Grafana, MQTT, Sql Databases, AWS (Firehose, Kinesis), Portainer, Ignition, Ignition modules with Reactjs and Java. OPC UA.

ONDASH [Jul 2023 - Present]

Project: ONDASH is the next generation of business intelligence, powered by AI, designed to simplify complex financial data and provide actionable insights.

Role: Cofounder and developing the first MVP

Tech Stack: TypeScript, ReactJS, Apollo GraphQL, Chakra UI components, ECharts, react-grid-layout for the dashboard, Python, Golang, FastAPI, GraphQL (with Strawberry). Pandas for data engineering. Mongo and Postgres, Ai Agent written with LangChain. CI/CD, Docker, AWS (Cognito, EKS, EC2, DocumentDB, S3), Redpanda (Kafka protocol)

Barco [Oct 2021 - Feb 2023]

Project: Automatic Camera System, involving object/person detection, tracking, and 3D reasoning.

Role: Full Stack developer, diverse contributions involved developing a comprehensive prototype with features like video and audio streaming, rule-based camera control utilizing the results of video/audio analysis, and designing and implementing API and UI experience.

I participated in user testing throughout various pilot projects.

Tech Stack: TypeScript, ReactJS, Zustand, Bootstrap components, Fabric.js, Storybook, Adobe XD for UI design, Python (FastAPI, Pydantic) Computer vision with GStreamer, MQTT. AES67 and RTP for audio and video streaming, algorithm development, unittest. Jenkins and Docker.

Applied-Math/Biomérieux [Jan 2019 - Sep 2021]

Project: Next Generation Sequencing

Role: Full Stack Consultant, designing and implementing two applications on the BNXT platform.

Tech Stack: TypeScript, ReactJS, Apollo, D3.js, unit tests (jest), microservices architecture, Kubernetes, Helm charts, servers in Go, schema-first API, Airflow, PostgreSQL, AWS (Lambda function, S3). Figma.

Hubscience [Sep 2017 - Oct 2018]

Project: HubScience is a text analysis application developed by researchers to enhance scientific literature reading and data extraction.

Role: Key Full Stack developer, designing and implementing web applications with text mining

Tech Stack: TypeScript, Angular, RxJS, Bootstrap components, Graph visualization with Visjs, Node.js server with MongoDB, RabbitMQ, Text Mining: Python using NLTK, algorithm development, unittest.

Ontoforce [Mar 2014 - Sep 2017]

Project: DISQOVER is a Data search platform in life science

Role: Lead Frontend Developer, implementing and designing the first UI

Tech Stack: CoffeeScript, Handlebars, Backbone.js, jQuery, Sass, D3.js, unit tests(jest), Sketch for UI design.

DesignSoft [1999 - Jan 2014]

Role: Software developer, designing and implementing applications for classroom usage in the scope of physics, and mathematics.

Projects with their tech stacks:

- Newton: Desktop applications developed using Delphi and VCL. Newton Game Dynamics Engine in C++.
- GebraCloud: web application using HTML, CSS, JavaScript, mathematical solver for algebra in Prolog
- TinaCloud: visualization with OpenGL and WebGL
- DataLogger based on webcam: numerical methods for curve fitting

Education

Eötvös Loránd University, Faculty of Informatics [2006 - 2011]

Master's degree, Information Technology

Specialization in mathematical modelling, economics and scientific processes, highly accurate algorithm and approximation problems.

Eötvös Loránd University [1998 - 2003]

Master's degree, Physics

General education in physics and specialization in particle physics and astrophysics.