

WORK EXPERIENCES

Software Development Engineer at [Amazon.com, Inc.](https://www.amazon.com)

May 2021 – Current

- Led the development of an Alexa web service that handles consent flow of **2.5M** Alexa-Ring users.
 - Created system's architecture design, implemented majority of this service from scratch to production.
- Lead engineer of 6-engineer team developed an [appointment scheduling system](#) serving users in 8 European countries.
 - Created system's architecture design, implemented majority of this service from scratch to production.
- Developed the ring.com/support website serving Ring product knowledge to **4M** monthly users.
 - Implemented majority of frontend UI/UX, content management backends and infrastructure.
- Worked on an distributed cloud system that connects [Alexa](#) and [Ring](#), processes **18k** events per second.
 - Implemented new features, operational monitoring, acceptance testing, and cloud infrastructure.
- Provided technical mentorship to a newly formed engineering team of 10 based in Vietnam.

Technologies: Java, NodeJS, TypeScript, ReactJS, Next.js, AWS cloud, AWS CDK (infrastructure as code), and internals.

Software Developer, freelance, at [Kaiserstuhl Oy](#)

May 2020 – May 2021

- Developed proof of concept for a multi-player quiz app. Implemented majority of backend and frontend: server logics, user interactions, real-time networking, content database, and deployment infrastructure.

This PoC later received 100k euro funding from Business Finland and private investors to start a new company.

- Solo developed a backend system for [Joblink Oy](#) to connect grocery workers with grocery store jobs.

The system had >150 API endpoints to support 3 different web/mobile apps for 3 different user types. Despite being very big, the system was well modularized, documented, and tested, according to feedback of new developers during handover.

Technologies: JavaScript, NodeJS, Sequelize, React Native, MongoDB, PostgreSQL, WebSocket, AWS cloud platform. —

Software Developer at [SenzoLive Oy](#)

Sep 2017 – February 2020

Software Developer, freelance, at [SenzoLive - Steerpath Oy](#)

February 2020 – August 2020

- Built an IoT cloud system that gathers and analyzes real-time data of **>5000** sensors from offices around the world.
 - Became the main developer, implemented majority of the system, and maintained its operation.
- Highly contributed to a web dashboard displaying statistics and real-time data from the system above.
 - [\[link to my UI contributions\]](#)

The IoT system served >100 offices of big customers around the world: Equinix, Netflix, Zalando, SAP, FNB, Dimension Data...

It was acquired by [Steerpath Oy](#) in November 2019.

Technologies: Golang, JavaScript, NodeJS, ReactJS - Redux, MySQL, Docker, Redis, Kafka, MQTT, AWS cloud platform.

AWARDS and COMPETITIONS

- Third prize in National Programming Olympiad, Vietnam** (equivalent to Finland's [Datatähti](#)) **2016**
- First prize in Muncipal Programming Olympiad, Vietnam** **2016**
- Ranked **5th** out of **603** participants in **Samsung Code the Next** **2017**
- Ranked **38th** out of **996** participants, full score in **Google Code Jam 2017 Kickstart Round C** **2017**
- Ranked **487th**, won a Google T-shirt in **Google Distributed Code Jam 2017** **2017**
- Team ranked **16th** out of **964** teams in **Shopee Code League 2021**, Kaggle's Data Analytics **2021**
- [Codeforces.com](#) : peak rating at **Master (2111)**, top **1.7%** among over **140 000** active users, [link to profile](#).

Codeforces.com is one of biggest websites that regularly holds hardcore programming competitions.

INDIVIDUAL PROJECTS

Gravity Simulation [<https://gravity.quangdel.com>] **2021**

- Simulating gravitational forces between object bodies. Used Quad tree to optimize object collision.
- Technologies: plain HTML/CSS, JavaScript, HTML5 Canvas.

Ant Colony Simulation [<https://ant.quangdel.com>] **2021**

- Simulating ant colonies. Highly optimized and parallelized JavaScript code to achieve very high frame rate.
- Technologies: ReactJS, JavaScript, WebWorker, HTML5 Canvas.

Distributed Computing Library [[Github](#)] **2017**

- Created a library for distributed computing using concepts from Message Passing Interface (MPI).
- All communication modules were written from Python's low-level socket networking functions.

Deep Q Learning [[Github](#)] and **A3C** [[Github](#)] **2016, 2017**

- Implemented two famous reinforcement learning algorithms that can learn to play many different 2D games.
- Computation of A3C was distributed across 5 home computers using MPI to speed up training.
- Technologies: Python, Tensorflow – Keras and MPI.

... and dozens of other projects on [my Github](#)...