



# Elizaveta Ragozina

## SOFTWARE ENGINEER

With interests ranging from web development to system integration, I'm especially passionate about contributing to scientific and research-focused projects.

[elizaveta-ragozina.me](https://elizaveta-ragozina.me)

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### SEP 2024 - PRESENT | SOFTWARE ENGINEER AT MASSACHUSETTS INSTITUTE OF TECHNOLOGY | CERN

Contribute to the AMS02 experiment on the International Space Station, focusing on:

- Embedding C development for USB-based front-end electronics and PowerPC systems running eCos RTOS (future AMS02 Upgrade). Close collaboration with firmware/hardware engineers on silicon detector readouts.
- Development of real-time DAQ software for telemetry, command processing, and calibration data flows
- Cross-platf. device communication: USB (libusb), CAN bus, multicast, custom protocols
- GUI tools in GTK for hardware testing, calibration, and monitoring

Developing of automation tools for monitoring using Python and Grafana API, including:

- Python Django based monitoring applications
- Scripts for Grafana upgrades and synchronization across various Grafana instances
- InfluxDB gap recovery scripts and configuration version control
- C-based feeder programs to stream detector data into time-series databases (InfluxDB)

Leading the creation of custom AlmaLinux ISO builds for CERN deployments:

- Building unified scripts for AlmaLinux and RHEL image generation
- Automation of DNF repos, system presets (e.g., nftables), and network configs

Operational Leadership:

- Serving as on-call Lead Shifter, handling real-time operations and coordination for DAQ
- Authoring daily run summaries and tracking upcoming operations

### DEC 2023 - AUG 2024 | CEO AND LEAD DEVELOPER AT CREATIVE BOOM GMBH

Leading a team of 3 developers in an agile (Scrum) environment, managing the full stack development (Scrum) and managing the clients acquisition and communication

Project: Steuero (application for client workflow management for a tax consulting agency)

- Design: Conducted functional and process analyses of requirements and competitor analysis; designed wireframes and a prototype with Figma; conducted user-study
- Frontend: React + MobX TypeScript for responsive UI + Accessibility WCAG2 standard
- Backend: Java Spring Boot | Microservices, DB: Postgres, Datev API
- AWS CodePipeline (CI/CD) + Kubernetes deployment; Testing: Jest, Playwright, JUnit

### FEB 2021 - JAN 2024 | SOFTWARE ENGINEER AT CERN (IT-SD-GSS)

- Designed and implemented user requested features for CERNBox, the CERN service to store, share and synchronize data across multiple devices and multiple users
- Improved usability and accessibility of CERNBox Web, several user study rounds
- Contributed to the open source base of CERNBox Owncloud web
- Contributed to Sciencemesh project: extension for federated sharing
- Stack: Vue.js, Javascript, Typescript; UI/UX Design: Figma, Inkscape
- Testing: Automated Cernbox Web testing with Playwright, Jest (unit tests)
- Deployment: Linux Centos7, puppet, nginx
- Member of Rota: co-responsible for ServiceNow tickets handling
- Mentor for a CERN summer student 2023, Mentor at Google Summer of Code 2022

**OCT 2019 - DEC 2020 | WEB DEVELOPER AT INDUSTRIAL ANALYTICS (INFINEON TECHNOLOGIES)**

- Designed, implemented and deployed monitoring & maintenance apps for machinery clients, e.g. turbo machinery gamified learning app, app with audio and text chat
- Frontend: React + Redux, Use of WebRTC, MaterialUI, Bootstrap
- Backend: Node.js + Express, JWT OAuth setup, Passport.js, RESTAPI, MQTT Grafana Server
- Databases: MongoDB, PostgreSQL, Redis
- Testing: Selenium, Jest; DevOps: CI/CD GitLab + Docker; UI/UX Design: Adobe XD, Inkscape

**MAR 2019 - SEP 2019 | RESEARCH ASSISTANT AT TU DRESDEN (CHAIR OF HCI)**

- Concepted, designed and implemented an Android based mobile museum guide for blind and deaf persons as well as persons with cognitive limitations
- Android Java, setup the SQLite database; GitLab CI; Adobe XD, Sketch

**JAN 2019 - DEC 2019 | EPAM FULL STACK DEVELOPER (INTERNSHIP)**

- Developed a scalable e-commerce prototype from 2000+ items using Java Spring Boot, React with microservices event-driven architecture, RESTful API
- Integrated Oracle, using Spring Data JPA, leveraged Oracle's indexing and query optim.
- Deployment: configured load balancer (nginx), event streaming with Apache Kafka

**JAN 2019 - DEC 2019 | PROJECTS SUPERVISOR AT TUD (INST. OF ST- AND MULTIMEDIA TECHNOLOGY)**

- As a mentor supported project groups for E-learning games in the form of weekly meetings, task distribution, coordination, code reviews. Evaluated and assessed projects

**OCT 2018 - FEB 2019 | ERASMUS+ PROJECT ASSISTANT AT TUD (CENTER FOR INTEGRATION STUDIES)**

- Prepared a refugee education project for Erasmus+ partner universities for the EU Education, Audiovisual and Culture Executive Agency application

**OCT 2017 - JUL 2018 | ASSISTANT PROJECT MANAGER AT QUEO**

- Created, managed and planned IT projects using agile methodologies (Scrum)
- Provided support in the content maintenance and website testing for customers

**VOLUNTEERING**

- CERN IT Lightning Talks Co-Organizer | from 2024
- Mentor for Mentoring@CERN program

**2013-2019 | BACHELOR + MASTER AT DRESDEN UNIVERSITY OF TECHNOLOGY (TUD)**

- Basic courses in Databases, Computer Networks, Programming, Algorithms and Data Structures, Software Technology, User Interface Engineering
- Advanced Computer Science topics, including User Interface Engineering, Software Technology, Web Applications, Data Analysis; Final Grade: 1.3 (Excellent)

**CERTIFICATIONS**

- NASA Cybersecurity training for Software Engineers | 2025
- CERN School of Computing on Security | 2023
- Ironhack Coding Bootcamp on Web Development (MERN Stack) | 2018
- Oracle Database SQL Certified Associate | 2014

**Udemy:**

- Software Architecture & Design of Modern Large Scale Systems
- The Complete Microservices & Event-Driven Architecture
- How To Design for Accessibility: for UX Designers (WCAG 2.2)
- UX Fundamentals: User Testing

**LANGUAGES**

English: C1

German: native

Russian: native

French: A2