

SARA KUTKOVA

DIGITAL FABRICATION & HARDWARE ENGINEER

CONTACT

✉ sara.kutkova@gmail.com
🌐 sari.sk
📍 EU, willing to relocate

SKILLS AND INTERESTS

Languages: Python, C, JavaScript
CAD: Fusion, KiCAD, OpenSCAD
Manufacturing: 3D printing, laser cutting, PCB milling, CNC machining, soldering
Software: Arduino, Node-RED, Unity, Digital Ocean

EDUCATION

Digital Fabrication Diploma Fab Academy

2024-2025
Program focused on rapid prototyping, electronics, and computer-controlled design and manufacturing.
Final project: [Oracle](#)

Master Studies, Computer Science Aalto University

2022-2025
Software Systems and Technologies track, minor in Digital Fabrication. Graduated with distinction.
Thesis: [Exploring tactile sensation of liquid for virtual reality](#)

Bachelor Studies, Computer Science University of Glasgow

2018-2022
Parallel and distributed systems track. Graduated with 1st class honours.
Dissertation: [Software framework for analysis, categorisation and visualisation on ion types in chemical reactions](#)

VOLUNTEERING

NGO Riesky and Trojsten

2016-2021
Co-organised 2 physics and 10 maths camps for talented students with focus on analytical and critical thinking and developing perseverance and creativity. In charge of NGO's finances 2018-2019.

Math Naboj Glasgow

2020
Head organiser of the math team competition Naboj (first time in Glasgow). Overseen marketing, successfully attracting 120+ participants and secured venue availability and catering. The event got cancelled last minute due to pandemic, but continued the following years.

PROFILE

A computer science graduate with experience in **rapid prototyping**, **digital fabrication**, and **smart wearables**. Conducted academic research in four countries within multidisciplinary teams. Looking for **engineering roles in prototyping workshops or labs** where I could combine digital design and programming with hands-on making.

WORK EXPERIENCE

Lab Technician and Research Assistant, School of EI. Engineering Aalto University, Finland

May 2024 - August 2024 & January 2025 - July 2025

- Was responsible for the **Wearables Lab** during student use, assisting with lab equipment such as **3D printers**, **sewing machines**, and **soldering stations**, managed lab access, safety, and opening times
- Assisted in **teaching the Smart Wearables course** (approximately 50 students) by developing instructional materials and [video lectures](#), and advising students on their final project (gesture recognition device)
- Researched and enhanced an **electrotactile system** simulating liquid sensations; designed and conducted user studies with over 40 participants

Prototyping Intern, School of Chemistry

University of Victoria, Canada

Jun 2021 - September 2021

- Modelled (**Fusion 360**), prototyped and tested a **3D-printed open-source** pump
- Optimised 3D printing time by 30% on Ender 3v2, assembled and programmed electronic components (**Arduino**, H-bridge)
- Submitted and presented a poster at Canadian Chemistry Conference and Exhibition 2021

Smart textiles researcher, School of Design

Pontificia Universidad Católica, Chile

August 2024 - December 2024

- Developed a biodegradable, hydrophobic tree shelter, and set up an **IoT-based** test site (**ThingSpeak**) to collect and analyse (**Pandas**) environmental data (moisture, wind, temperature) from prototypes and commercial shelters
- Built and tested a fog chamber to quantify the fog-moisture collection rate of different materials (**Data loggers**)

Research Assistant, School of Mathematics and Statistics

University of Glasgow, Scotland

July 2022 - October 2022

- Worked with a model of sea lice diseases and treatments in Scottish lochs
- Preprocessed and visualised high volume of data from hundreds of simulations
- Co-author of a **paper** published by PLOS One journal, generated complex figures and plots (**Python**, **Matplotlib**)

Software Engineer, DevOps

GUSS (now Loopsio), Scotland

September 2020 - April 2022

- Twitter Language project: Scraped and sanitised 10M+ tweets, and created a heuristical gender prediction pipeline based on usernames. Deployed a custom web-based scraping job manager (**Django**, **Nginx**)
- Digital Empowerment project: Maintained a **CD** pipeline (**GitLab**) deploying Django, Slackbot and **Postgres** services in an environment of 4+ database and application components (**DigitalOcean**)

PROJECTS AND ACTIVITIES

Junction hackathon challenge winner

Helsinki

November 2022

- One of the largest hackathons in Nordics, **1300 participants**
- Our team **won** the Wolt challenge. Project: Last mile, same hour, user-friendly delivery service using phone authentication and preserving location anonymity

Hacker olympics & Code olympics winner

Glasgow

September 2019, 2020

- Solved competitive programming (Codeforces like) challenges in a team of 4, ranked 1st and 1st among ~45 other teams