



ESZTER BÁTHORY

CONTACTS

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LANGUAGES

ENGLISH – professional

ITALIAN – advanced

HUNGARIAN – native

SPANISH - beginner

SKILLS

Problem Solving,

Critical thinking,

Accuracy and precision, both
in team and alone,

Time Management,

Reliability,

Diligent work time,

Version control (SVN, git),

MATLAB,

C#,

Unity3D,

Python,

Timeseries Database,

Arduino,

Data Science,

ABOUT ME

Experienced and reliable professional with strong interests in medical engineering, neuroscience and software development. Known for critical thinking, problem-solving, and a proactive approach to seeking new challenges and opportunities in technical fields.

Personal website: <https://4eszter4.github.io/Intro/index.html>

EDUCATION

Budapest University of Technology and Economics

BIOCHEMICAL ENGINEER, B.Sc. Healthcare specialization

Faculty of Chemical Technology and Biotechnology

Sep 2015 – Jan 2019

BIOMEDICAL ENGINEER, M.Sc. with honors

Faculty of Electrical Engineering and Informatics

Sep 2019 – Jun 2021

PROFESSIONAL EXPERIENCES

• **Clario Clinical**, *Jun 2024 – Sep 2024*

Solution Design Analyst, eCOA - remote

- Designing charters for clinical trials in multicultural environment.

- Collaborating with clients and team members to ensure protocol compliance.

• **Femtonics Ltd. / BrainVisionCenter**, *Feb 2020 – May 2024*

Bioengineer - device, and software development, *Jul 2023 – May 2024*

- Device and software development (Unity3D) on designing animal virtual environments for neuroscientific researches. Oversaw the device functionality, maintenance, and technical testing. Played a crucial role in optimizing, creating protocols, and teaching the use of the devices.

- Enhanced device functionality through testing, and communication with teammates from different backgrounds.

- Real-time online feedback developed to the GUI for more effective experiments and augmented user experience.

- Managed software-hardware integration for in vivo animal experiment tasks.

- Developed internal documentation (Sphinx - HTML) and provided training material to international clients.

- Advertisement and demonstration.

- Insight to basic PLC programming, robotics, database queries, and GUI design.

Basic PLC knowledge,
 HTML documentations,
 Scripting,
 In vivo optogenetic
 manipulation in mice,
 Viral transfection,
 Multi-photon microscope
 user,
 Driving license,
 Efficient in multicultural
 environment,
 Mentoring



Research Scientist in neuroscience – *Initial role*

-Co-author of a Nature Methods paper.

[Article Link](#)

- Device specialist at international and national conferences.
- Presented research on poster sessions at conferences (OPTOGEN, IBRO, FENS), contributing to ongoing neuroscientific investigations.
- Perform experiments and protocol designs for cortical signal processing studies, extended with data analysis.
- Perform in vivo optogenetic manipulations, viral transfection with micropipette injections, mouse craniotomy surgeries, and active use of multiphoton microscopy (acousto-optic 3D) in neurobiological research, and data analysis development.

• **Gottsegen National Cardiovascular Center, Hospital, Oct – Dec 2021**

Instrument Engineer

- Handled logistics, serve coordination, and technical documentation for medical equipment projects.
- Liaised with medical device companies and distributors for acquisitions and contracts.

• **OFESZ Molecular Diagnostic Laboratory, Jun – Sep 2021**

Laboratory Assistant (self-employment)

- Conducted PCR diagnostics and handled samples for in vitro human diagnostics.
- Operated blood analyzers and chemical automation systems.

EARLY CAREER & VOLUNTEERING

• **Hungarian Academy of Sciences, Research Center for Natural Sciences, Institute of Organic Chemistry, and Chemical Biology group,**

Volunteer Researcher, Sep 2017 – Dec 2018

- Preparative work with DNA oligomers, and performed measurements with spectrophotometry, capillary electrophoresis.
- Data analysis and visualization.

• **Sanofi, Chinoin Zrt., Development project manager intern, Jun – Sep 2019**

• **Department of Otorhinolaryngology, Head and Neck Surgery., Intern project**

- Project in biocompatible materials, cochlear implantation, and hearing aid devices.
- Observe implant operations, intraoperative measurements, facilitate the tuning of the signal processor for patients.

• **Femtonics Ltd., Volunteer Junior Researcher** during the first year.

• Participation in Scientific Student Conference – **Role of Vasoactive Intestinal Polypeptide Expressing Interneurons in Cortical Signal Processing** (II. price).