



# AKOS PASZTOR

ELECTRICAL ENGINEER • HARDWARE AND FIRMWARE DEVELOPER

## AWARDS

- “KBME” Professional Scholarship of Faculty** 2015  
25 participants (out of 500) were awarded based on outstanding academic work and GPA.
- “Rubin Young Talent Sustainability in Engineering” Special Prize, and Scientific Students Association Conference - Third Prize** 2014  
Achieved for presenting “*Development of a Modular Home Automation System*” (see below) at Scientific Students Association Conference among 90 participants.

## PROJECTS

**Geophone Platform** 2017 - 2018  
Developed a state-of-the-art, networked geophone platform with ultra-low power consumption; always-on, dual-side, multi-stage triggering; co-detection and more. Developed as my master thesis. The device went into production, 50 devices are being deployed to the Swiss mountains.  
<https://akospasztor.com/projects/geophone/>

**WuLoRa: Energy-Efficient IoT Sensor Node** 2017  
Developed as a semester thesis at ETH Zürich, featuring always-on wake-up radio, LoRa, dual-microcontroller platform, numerous sensors and ultra-low power consumption.  
<https://akospasztor.com/projects/wulora/>

**Medical Monitoring Device** 2015  
Developed as a semester project at ETH Zürich, focusing on ultra-low power system design, deterministic runtime and timing predictability for bounded response times.  
<https://akospasztor.com/projects/mmd/>

**Home Automation System** 2014  
Led a team with constant collaboration, developed a home automation system from scratch. Developed the hardware, featuring 32-bit ARM microcontroller, LCD touch screen, Bluetooth, 2.4GHz radio, Ethernet, USB, Sensors, SD card with FAT file system support. Developed the embedded software. Created and published a software library for the graphic controller chip.  
<https://akospasztor.com/projects/homecontrol/>

**The myPhone project** 2013  
Developed a mobile phone from scratch, featuring GSM, initiate and receive calls, LCD screen, custom foil keyboard, battery, charging circuit, contacts management, USB communication.  
<https://akospasztor.com/projects/myphone-v2/>

## WORK EXPERIENCE

**Embedded Hardware & Software Developer at ETH Zürich** 2016 - 2018  
Worked in the Computer Engineering Group of ETH Zürich. Fully redesigned the “*Wireless GPS*” device, used state-of-the-art technologies, added cellular. Rewrote the software from scratch. The device went into production, 30 devices are being deployed to the Swiss mountains.

**Assistant at Department of Automation and Applied Informatics, BUTE** 2015  
Worked as an assistant in the microcontroller laboratory, guided and tutored more than 50 BSc. students, evaluated their semester projects including hardware and software development.

**Hardware Developer, Software and Web Developer at SeaSoft Ltd.** 2009 - 2015  
Developed various GSM-based data acquisition hardware. Developed configurator software for devices in C++ using Qt SDK. Developed own C++ libraries for communicating with hardware. Developed a new web portal for the company and increased 30-day active users by 75%.

**Software Developer at PC-Box Ltd.** 2010  
Worked in a team developing ERP software for GDF-SUEZ (National Gas Provider) used by 1000+ users. Participated in both front-end development and back-end development.

## EDUCATION

**ETH Zürich** 2015 - 2018  
MSc. degree in Electrical Engineering and Information Technology.  
Member of Computer Engineering Group.

**Budapest University of Technology and Economics** 2011 - 2015  
BSc. degree: excellent with highest honors, finished in top 5% of graduates based on GPA.  
Ranked absolute 1st among students during embedded systems specialization semester.

## CONTACT

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## SKILLS

### Hardware

- Analog & digital circuits
- PCB design
- Altium Designer, Nexus
- Microcontrollers
- Ultra-low power design
- Hardware analysis
- Testing, debug, soldering

### Software

- C, Embedded C
- Bare-metal firmware
- RTOS
- Advanced debug & tracing
- C++, Qt SDK
- Version control (git, svn)

## LANGUAGES

- English - fluent
- German - intermediate
- Hungarian - native

## INTERESTS

Smart applications, Gadgets,  
Sensors, Communication,  
Mobile tech, Automation,

Cars, Driving, Swimming,  
Snowboarding, Judo