



TÕNIS LUSMÄGI

COMPUTER & SYSTEMS
ENGINEERING

ELECTRICAL ENGINEERING

ABOUT ME

I started in Electrical Engineering where I discovered my passion for digital systems. I specialized in Computer and Systems Engineering and became an expert in military robotics and software development. I have over 10 years of experience in these fields.

CONTACT

+372 5455 6942
tonis.lusmagi@gmail.com

lusmagi.com
LinkedIn/tonis-lusmagi
GitHub/tonis-lusmagi

DOMAINS

EMBEDDED SYSTEMS



ROBOTICS



SOFTWARE DEVELOPMENT



EDUCATION

MA - COMPUTER AND SYSTEMS ENGINEERING @ TALTECH

September 2017 – June 2019

I graduated in Computer and Systems Engineering from TalTech. I design digital systems - Systems-on-Chip. I'm proficient in verification, validation and testing. Next to computer hardware development, I'm competent in automation, software engineering, machine learning and more. My main programming languages are C, C++, Python, VHDL and BASH. I wrote my master's thesis on Intel SGX performance & security, independently discovering similarities with MDS (Microarchitectural Data Sampling) speculative execution vulnerability known as RIDL (Rogue In-Flight Data Load).

BA - ELECTRICAL ENGINEERING @ TALLINN UNIVERSITY OF APPLIED SCIENCES

September 2013 – June 2017

I graduated Cum Laude in Electrical Engineering from Tallinn University of Applied Sciences. I studied electrical- and control systems design from electronics to high voltage. I have electrician's A-level competency readiness and Electrical Engineering EQF Level 6. I wrote my diploma thesis on battery systems for electric aircrafts.

COMPETENCIES

- **Operating Systems:** Windows, Linux, Android
- **Office:** Microsoft Office, LibreOffice, WPS Office
- **Programming:** C, C++, C#, Python, Bash, Java, VHDL, SystemVerilog,
 - SystemC, SQL, ST, MATLAB, Simulink, CoDeSys, Rust
- **Libraries & Frameworks:** ROS2, Boost, QT, OpenCV
- **EDA tools:** Xilinx Vivado, Intel Quartus Prime, Mentor Graphics ModelSim/QuartaSim
- **Electronics CAD:** Autodesk EAGLE, KiCad
- **2D CAD:** Autodesk AutoCAD, CADS Planner
- **3D CAD:** Autodesk Fusion 360, Solid Edge, Rhino
- **Development Boards:** AVR, FPGA, STM32
- **Machine vision:** Nvidia Jetson, FLIR, thermal and spectral imaging
- **Languages:** Estonian (native), English (C1), German (A1)
- **Interpersonal Skills:** adept communication, collaborative work experience
- **Leadership Skills:** software project leading, team leading, business leading

WORK EXPERIENCE

SENIOR SOFTWARE DEVELOPER @ DEFENSHERE

January 2023 – present

Vegvisir is a Mixed Reality Situational Awareness System (MRSAS) that provides personnel of armored vehicles a better understanding of their immediate surroundings and areas of interest further away.

SOFTWARE DEVELOPER @ MILREM ROBOTICS

May 2019 – December 2022

Milrem Robotics manufactures unmanned ground vehicles for defense- and security forces and commercial and industrial clients. Core software for TheMIS UGV and Type-X RCV. CANbus, UDP/TCP, Serial comms for vehicles. GNSS localization. Weapons and systems integration. Military radios. iMUGS project. General robotics.