
WORK EXPERIENCE

Master Thesis worker, Oras oy ([link to certificate](#))

05/2022 – 12/2022

Rauma, Finland

- Program Silab's EFR32 controller to collect hydraulic measurements from the pipeline (pressure, flowrate, temperature)
- Collaborate with experts in the water laboratory to design a pilot pipeline.
- Applied hydraulic theories (transient analysis) in detecting abnormal behaviors in the pipeline.
- Develop a machine learning model using Scikit-learn module to detect and localize leaks.

Microcontroller project – Prototyping with Microchip ATMEGA328P ([link to report](#))

10/2020 – 04/2021

Tampere, Finland

- Design a heater control system by utilizing ATMEGA328P microcontroller's functional modules.
- Perform hardware-prototyping with Proteus tool (programming in C the USART, ADC and PWM functionalities).
- Collaborate with fellow team members in procuring the PCB layout for the prototype.

Bachelor Thesis project ([link of IEEE student paper](#))

01/2020 – 04/2020

Turku, Finland

- Read sEMG and IMUs data from Myo armband from gateway device for filtering and categorizing different hand gestures.
- Utilized MQTT protocol to bridge connection with microcontroller to remotely control robotic arm.
- Implemented gesture-based appliance control with HassIO.

Visiting research assistant, University of Turku ([link to evaluation](#))

12/2019 – 03/2020

Turku, Finland

- Built a smart system for controlling actuators based on EMG signals received from Myo haptic band.
- Additionally signals such as accelerations, angular velocity, in combination with EMG from the wearable sensors mapped with different control motions of a robotic arm.
- Support senior researchers their continuing research with Health monitoring systems.

Competence track project, Embedded System

09/2019 – 02/2020

Turku, Finland

Project: Home Assistant with Raspberry Pi

- Installed HassIO as home assistant service on Raspberry Pi 4.
- Logging motion sensor, room temperature and humidity data on webUI collected via SPI bus with Arduino UNO.
- Reconfigured automated control with in-door home appliances (room heater, lamps).

Front-end web developer, Urbanzee ([link to certificate](#))

6/2018 – 11/2018 

Turku, Finland

- Co-designed, co-developed and implemented a prototype mobile web-App in a team with the project owner.
- Used React/Redux, Semantic UI, and related software packages for building user interface.
- Integrated with Django API on the frontend to display relevant data.

I am fond of studying how computers are assembled, from the logic gates up to the complex general-purpose processors or ASIC, thus, Embedded System Engineer is my career path choice. My knowledge about Embedded Systems was much enriched near the end of my Bachelor studies when I started to do extensive research about the advances in the HTI field and compose my thesis. Furthermore, from courses in my Master program at Tampere University, I have become more equipped with the knowledge and deeper understanding about various branches of Embedded computing such as Signal processing, machinery, process automation, computer engineering, etc. Personally, I have preference towards computer engineering and signal processing, which I find most interesting to study.

My current plan is to gain some experience in the field either from the industry or from researchers and strengthen my understanding from what I have learnt so far about Embedded Systems and related fields such as IoT.

SKILLS AND TRAININGS

Domain skills

- Embedded software, IoT systems design, Back-end development, HCI Research, machine learning

Development Environment

- Simplicity Studio, Proteus, Microchip Studio, Mentor Graphic ModelSim, Vivado, Qt Creator, Visual Studio, Embedded Linux, MATLAB, Spyder.

Programming languages

- C, C++, VHDL, Python

Training

- Oras Oy, TIERS, theFIRMA

EDUCATION

Master of Science, Information Technology (on-going) (Major - Embedded Systems)

Tampere University, Finland

08/2020 – Present ETCS 132/120, CGPA: 3.86 ([link to ToR](#))

Courses

- Embedded Systems: Introduction to Embedded Systems, Digital Design, Logic Synthesis, Microcontrollers, Real-Time Systems, Embedded Systems and Electronics Productization, Concurrency, Parallelism, System Design, Computer Architecture (RISC-V).
- Minor - Communications and Networking: Communication Theory, Internet of Things, 5G Mobile Communication, IoT Wireless Communication

Bachelor of Information Communication Technology (specialization – Embedded Systems)

Turku University of Applied Sciences, Finland

09/2016 – 06/2020 ECTS 264/240, GPA: 4.5 ([link to ToR](#))

Basic studies in Electronics and Software engineering during 1st and 2nd year, advanced studies in Embedded System specialization in 3rd and 4th year.

ERASMUS exchange

Hamburg University of Applied Sciences, Germany

01/03/2019 – 31/07/2019

ETCS 30 ([link to ToR](#))

ACHIEVEMENTS

Tampere University tuition fee scholarships

(08/2020 – 07/2023)

Awarded Tampere University tuition fee scholarship, which covers 100% of tuition fees for two academic years.

ERASMUS grant for international exchange

(03/2019 – 07/2019)

Awarded student grant for international exchange program ERASMUS, covering living cost during summer period in Hamburg HAW.