

Veysi ADIN

Nationality: Turkish Date of birth: 17/02/1998 Gender: Male

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ABOUT ME

Hey! It's **Veysi ADIN**, and I'm an **Embedded System Engineer** in Sundsvall, Sweden. I'm a Ph.D. student at Mid-Sweden University, and currently, I'm working as a research assistant at Sensor Technology Research Center at Mid-Sweden University. I got my master's degree in the field of robotics and control software development. I enjoy robotics, electronics, DIY projects, and learning new things every day. I like to develop applications that solve real-life problems.

WORK EXPERIENCE

Research Assistant

Mid Sweden University [01/09/2022 - Current]

City: Sundsvall **Country:** Sweden

My research focuses on machine learning on embedded systems.

Research Assistant

Korea Institute of Science and Technology [01/09/2020 - 31/08/2022]

City: Seoul

Country: South Korea

I worked on development of control framework for medical robots, using EtherCAT protocol based on CiA402 standard and ROS2 as a middleware running on real-time Linux. As a use case for this control framework, we tested our framework on spine surgery robot being developed in Healthcare Robotics Center.

- I designed several PCBs, including safety watchdog PCB, and a flexible PCB for measuring force on the tip of attached instrument to spine surgery robot.
- Worked on safety and verification of medical robot and medical robot software complying various standards, including IEC62304, IEC60601-1/2, ISO 13485.
- Project GitHub Link
- Project Documentation Link

R&D Intern

Korea Institute of Science and Technology [06/01/2020 - 31/08/2020]

City: Seoul

Country: South Korea

During this internship, I worked with a start-up company to implement control software and an initial prototype of a medical device called microdebrider, which is used in endoscopic sinus surgeries. Throughout this project, I used:

- · C++
- Ot
- CiA402
- Git
- EPOS Linux Library
- Doxygen

- Raspberry Pi
- CAN Protocol
- EasyEDA (for custom PCB design)
- SolidWORKS (for prototype case design)
- Project GitHub Link
- Project Documentation Link

EDUCATION AND TRAINING

Electronics Ph.D.

Mid Sweden University [01/09/2022 - Current]

City: Sundsvall **Country:** Sweden

Website: https://miun.se/

AI & Robotics Master

University of Science and Technology / Korea Institute of Science and Technology [01/09/2020 –

31/08/2022]

Address: 02792 Seoul (South Korea) Website: https://ust.ac.kr/eng.do

Final grade: 4.33/4.5

Thesis: Development of Medical Device Control Software Framework

Electrical & Electronics Engineer

Mersin University [01/09/2015 - 24/05/2019]

Address: 33110 Mersin (Türkiye)

Final grade: 3.67/4

Thesis: Wi-Fi Controlled Natural Gas Valve System With Android Based Software

LANGUAGE SKILLS

Mother tongue(s): Kurdish | Turkish

Other language(s):

English Korean

LISTENING C2 READING C2 WRITING C2 LISTENING B1 READING B1 WRITING A2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2 SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

AI / Machine Learning / Deep Learning

Python / Tensorflow / PyTorch / ONNX & ONNX Runtime / MATLAB / Julia / Pandas Numpy Scikit-learn Scipy libraries

Embedded System Design

C / C++ / Qt / STM32 / Altium Designer / Proteus / PCB Design

Prototyping Products

SolidWorks / SMD soldering / Arduino / Raspberry Pi

Others

LaTeX / EtherCAT / CiA 402 / Git / ROS/ROS2 / Real-time Linux

CONFERENCES AND SEMINARS

Leveraging Acoustic Emission and Machine Learning for Concrete Materials Damage Classification on Embedded Devices

[IEEE Transactions on Instrumentation and Measurement, 23/08/2023 - 23/08/2023]

Link: https://ieeexplore.ieee.org/document/10227301

Real-Time Acoustic Monitoring of Foraging Behavior of Grazing Cattle Using Low-Power Embedded Devices

[IEEE Sensors Applications Symposium (SAS), 2023, Ottawa, Canada, 18/07/2023 – 20/07/2023]

Write here the description...

Link: https://ieeexplore.ieee.org/abstract/document/10254175/

Tiny Machine Learning for Real-time Postural Stability Analysis

[IEEE Sensors Applications Symposium (SAS), 2023, Ottawa, Canada, 18/07/2023 – 20/07/2023]

Link: https://ieeexplore.ieee.org/abstract/document/10254126

Tiny Machine Learning for Damage Classification in Concrete Using Acoustic Emission Signals

[IEEE International Instrumentation and Measurement Conference (I2MTC), 2023, Kuala Lumpur, Malaysia, 22/05/2023 – 25/05/2023]

Link: https://ieeexplore.ieee.org/document/10175972

Development of Control Framework for Spine Surgery Robot Using EtherCAT

[The 17th Asian Conference on Computer Aided Surgery (ACCAS) / Virtual Conference, 08/12/2021 – 10/12/2021] Link: https://github.com/veysiadn/veysiadn.github.io/raw/master/assets/pdf/

ACCAS2021 VeysiADIN ChunwooKim.pdf

Development of motor control component for medical robot software framework based on EtherCAT

[Seoul, South Korea / Korea Robotics Society Conference (KRoC), 19/05/2021 - 21/05/2021]

Link: https://github.com/veysiadn/veysiadn.github.io/raw/master/assets/pdf/KROS Paper Veysi - Submitted

20210311.pdf

HONOURS AND AWARDS

Valedictorian of Engineering Faculty

Mersin University Engineering Faculty [24/05/2019]

I have ranked first among the faculty of engineering students graduating in 2019.

Scholarship

Vehbi Koc Foundation [01/09/2016]

HOBBIES AND INTERESTS

Hobbies

Basketball, football, hobby electronics, 3D printing, cooking, Sci-Fi movies and books.