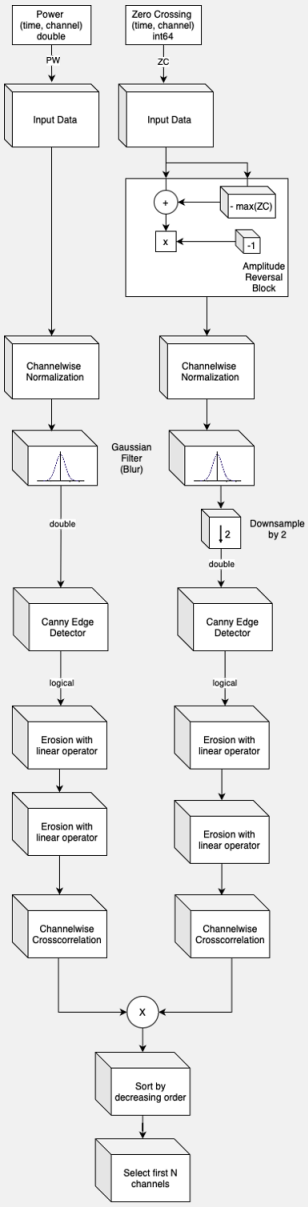
{% include base_path %}

Industry Experience

2021 April - 2022 June | Part-Time Signal Processing Engineer in NANOTAM

During my work on processing OTDR data, I utilized classical and efficient signal processing techniques with MATLAB, Python, and C++. I researched the use of chirped pulses as the probing signal for phi-OTDR, calculated the noise profile of the ADC and DAC modules in various projects, and programmed an Nvidia Jetson board for specific computer vision applications. Additionally, I designed a real-time signal processing pipeline in MATLAB for phi-OTDR event detection.



2022 July - August | Summer Internship in ASELSAN

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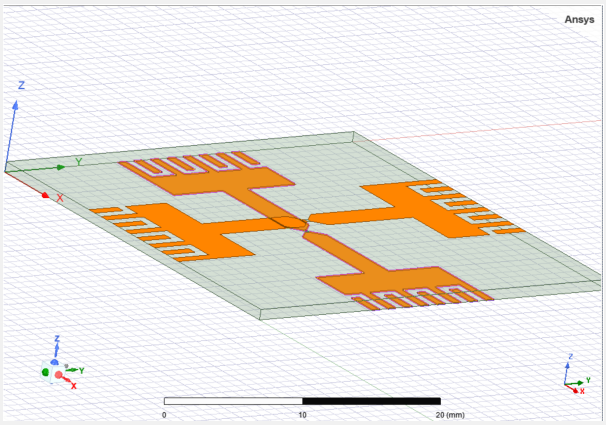
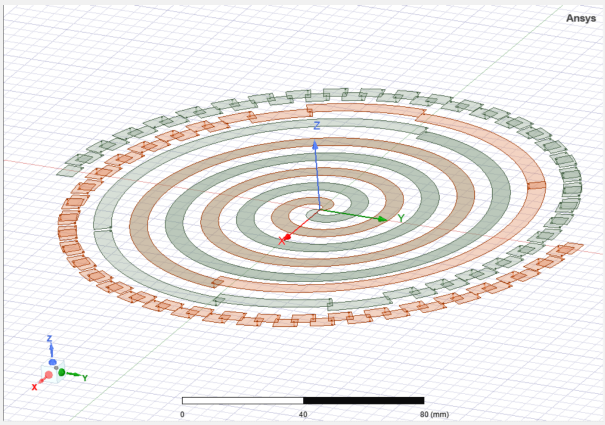
aselsan

During my internship in the Antenna Design Group, I successfully designed wideband antennas that met specific requirements using Ansys HFSS software. My responsibilities included optimizing the physical dimensions and selecting appropriate superstrate materials for an array antenna.



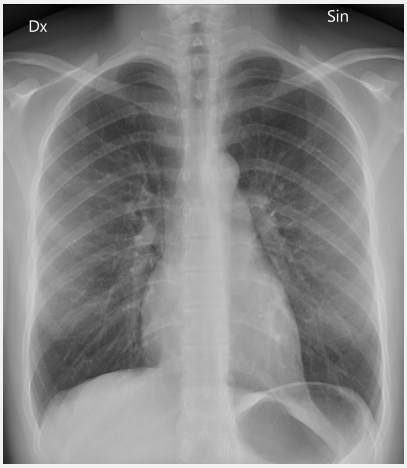
Furthermore, I designed a meandered spiral Archimedean antenna tailored for a specified frequency range, ensuring optimal performance and efficiency.



2021 June - July | Summer Internship in UMRAM

UMRAM

During my summer internship at UMRAM, I focused on several key projects. I conducted extensive research on deep learning models for computer vision, designed medical X-ray image classifiers using transfer learning techniques with backbone models like EfficientNet, ResNet, and Inception, and developed a robust classifier model for detecting monkeypox disease from image data.



Research Experience

2024 Sep - Present | Undergraduate Researcher in Biomedical Imaging Group

EPFL Image

I have conducted research on developing multiresolution based optimization schemes for the phase retrieval problem in ptychography imaging domain. The work includes the merge of two fields and comparisons with classical methods in ptychography like PIE. The research is expected to be concluded with a journal paper.

2023 Mar - 2024 Aug | Undergraduate Researcher under Prof. Sinan Gezici

Bilkent Image

I have conducted research on visible light positioning and the potential use of intelligent reflective surfaces under the supervision of **Prof. Sinan Gezici**. As part of my studies, I completed a semester project titled **ML-Enhanced VLP in IRS-Assisted Indoor Environments with a Single LED Transmitter**. Building upon this work, I authored and published a journal paper, [**IRS Aided Visible Light Positioning with a Single LED Transmitter**] (https://doi.org/10.1016/j.dsp.2024.104799), in *Elsevier Digital Signal Processing*. The study focuses on enhancing localization performance, measured by the Cramér-Rao Lower Bound (CRLB), by leveraging intelligent reflective arrays with a single LED transmitter.

2021 Mar - Aug | Undergraduate Researcher in UMRAM

I have worked on Deep Learning on a special focus of biomedical images in the ICON Lab under the Supervision of **Prof. Tolga Çukur**. I have developed classification models for chest tomography image detection tasks and conducted theoretical research on Capsule Networks. The project "Disease Detection from X-Ray Images with Visual Transformer Neural Networks (118C543)", I've worked on, was supported by the **2247 - C STAR-Intern Researcher** Programme.

Coding Skills