AHMET AKMAN

Education

Université Paris-Saclay

2024 - 2025*

Master of Science (M2) in Computational Neuroscience and Neuroengineering

Paris, France

Program organized by NeuroPSI and CentraleSupélec

Middle East Technical University

2020 - 2024

Bachelor of Science in Electrical and Electronics Engineering

Ankara, Turkey

Specialized in Signal Processing

[CGPA: 3.45/4.0]

English Preparatory School

2019 - 2020

Experience

ETHZürich

January 2025 - Ongoing

Master Thesis Intern

Zurich, Switzerland

• Working on bio-inspired learning within the Grewelab at Institute of Neuroinformatics.

CentraleSupélec L2S

October 2024 - December 2024

 $Project\ Researcher$

Gif sur Yvette, France

• Worked on control theory approach to self-organized criticality in neuronal systems. Poster presented.

METU OGAM (Center for Image Analysis)

February 2022 - August 2024

Undergraduate Researcher

Ankara, Turkey

- Worked on event-based vision and neuromorphic schemes under the supervision of Prof.Dr.Aydın Alatan
- Developed the SotA method in event-based video frame interpolation and published it at a major conference.
- Worked on event-based high speed feature tracking problem.

Max Planck Institute for Dynamics and Self-Organization

July 2023 - September 2023

Research Intern

Göttingen, Germany

• Have been working on self-sustaining only-excitatory neuronal network dynamics under the supervision of Dr. Johannes Zierenberg and Jonas Dehning in the Prof. Viola Priesemann's group. (Ongoing project.*)

HAVELSAN

October 2023 – August 2024

Candidate Engineer

Ankara, Turkey

Worked in autonomous and swarm systems team as a computer vision specialist.

ESEN System Integration

July 2022 - August 2022

Intern

Ankara, Turkey

- Worked on development of deep-learning based EO-EO, EO-IR image registration system.
- Implemented 5 state-of-the-art paper in Python and PyTorch and tested them with airborne-spaceborne data.

Publications

Conference Workshop Paper

2024

Kurt, Y. B., **Akman**, A., & Alatan, A. A. (2024). Causal Transformer for Fusion and Pose Estimation in D-VIO. <u>ArXiv</u> Presented in-person at ECCV2024.

Conference Paper

2023

Kilic, O. S., **Akman**, **A.**, & Alatan, A. A. (2023). E-VFIA: Event-Based Video Frame Interpolation with Attention. <u>IEEE</u> Presented in-person at ICRA 2023.

References

Professor Dr. A. Aydın Alatan

Faculty of METU EEE, Founding director of METU OGAM

Contact: alatan@metu.edu.tr +903122102351

Dr. Johannes Zierenberg

Post-doc at Max Planck Institute for Dynamics and Self-Organization

Contact: zierenberg@ds.mpg.de +495515176475

Languages

Turkish: Native - English: C1, IELTS Academic Score: 7.5 (10/2023) - French and German: Beginner

Honors and Awards

Honors and Awards	
Graduation GPA METU Electrical and Electronics Engineering Dept. Ranked in top %10 upon graduation.	Jun 2024
First Place METU Aerospace Engineering Dept Boeing VTOL competition with METU Göksat Space Team	Nov 2021
Second Place & Best Presentation Havelsan - T3 Foundation Swarm UAV competition, Teknofest, using Crazyflies quadcopters	Sep 2021
Third Place Pixery Hackathon, IEEE METU 48-hour hackathon for aiding visually impaired via machine learning and CV	Jan 2020
National University Entrance Exam $\ddot{O}SYM$ - Ministy of Education Ranked 1174th amongst 2024549 ($\approx 2M$) participants.	Jun 2019
First Place Akdeniz University AI for UAV project, Prof. Dr. Fuat Sezgin Competition	May 2019
Second Place TÜBİTAK Cube Satellites Project, Coding Category, Inter-High School Research	Mar 2018
First Place <i>Ministry of Education - TÜBİTAK</i> 11th International MEB Robotics Competition, Design and Run	May 2017

Leadership / Extracurricular

METU Göksat Space Team

January 2020 - November 2021

 $Team\ Leader$

Techical Student Team

- Led the METU Göksat Space Team in national and international aerospace competitions, overseeing the organization and operations of four specialized subteams: Electronics/Software, Organization/Sponsorship, Mechanical, and Integration.
- Served as Electronics/Software subsystem designer. Developed the electrical subsystem for a mini UAV, designed electronics and PCBs for avionics across three model satellites, and created embedded software for satellite models.

Antalya Anatolian High School Physics Society

October 2016 – June 2018

Science Club Co-President

- Co-led the Physics Society, organizing initiatives to foster scientific engagement among students.
- Coordinated events, including sky observation nights, educational conferences, Pi Day celebrations, and science fair experiments.
- Established club room and robotics division.

Technical Skills

Programming Languages: Python, MATLAB, C, Julia, ARM Assembly

Technologies/Frameworks: OpenCV, PyTorch, Git, Conda, NumPy/CuPy, Matplotlib, SciPy, Intel LAVA, Brian2 Simulink, Linux, LabView, Verilog HDL, Qt, Eagle CAD, Fusion360 CAD, Siemens NX CAD, HTML/CSS, LATEX

Interests

Turkish Classical Music (Former soloist at ODTÜ KTMT), Street Photography, Astronomy, Motorsports, Football