Ahmet Akman

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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

CentraleSupélec L2S **October 2024 – Ongoing**
Project Researcher *Gif sur Yvette, France*
- Working on control theory approach to self-organized criticality in neuronal systems.

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.* ArXiv
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.* IEEE
Presented in-person at ICRA 2023.

Preprint **2023**
Akman, A.*,Kilic, O. S., & Alatan, A. A. (2023). MAEVI: Motion Aware Event-Based Video Frame Interpolation.* ArXiv
ArXiv Preprint.

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

First Place | *METU Aerospace Engineering Department-Boeing* **November 2021**

- As METU Göksat Space Team we have taken first place in the METU VTOL competition sponsored by Boeing. The objective was to design-build and fly a VTOL aircraft to accomplish various payload missions.

Second Place and Best Presentation | *Havelsan-T3 Foundation* **September 2021**

- As METU Göksat Space Team, we have taken the second place and the best presentation award amongst 112 teams in the Swarm UAV competition held by Havelsan in the scope of 2021 Teknofest technology competitions. Teams were expected to demonstrate developed swarm systems' robustness using multiple quadcopters (Crazyflies) indoor.

Third Place | *Pixery Hackathon IEEE METU* **January 2020**

- Our team has taken the third place in 48 hours Pixery Hackathon IEEE METU. Our project aims to help visually impaired people for walking. We used computer vision, machine learning and android technologies to construct our prototype.

First Place | *Akdeniz University* **May 2019**

- The research project about real-time artificial intelligence process on UAV. The project won the first place in the technology category in the Akdeniz University Prof.Dr.Fuat Sezgin 3rd Inter-High School Mathematics and Science Project Competition.

Second Place | *TÜBİTAK* **March 2018**

- The research project won the second place in the coding category in the TUBITAK Inter-High School Research Projects Competition. Project name: Developing Cube Satellites on Femto Class Intended Fundamental Space Research.

First Place | *National Ministy of Education-TÜBİTAK* **May 2017**

- 11. International MEB Robotics Competition in Design and Run (like Hackathon) Category

Leadership / Extracurricular

METU Göksat Space Team **January 2020 – November 2021**

Team Leader *Techical Student Team*

- Leader of METU Göksat Space Team which attended national and international aerospace-based student competitions. Responsible for organization and running of the four different subteam which are electronics/software, organization/sponsorship, mechanical, aerospace and integration subteams.
- Electronics/Software Subsystem Designer. Designed electrical subsystem of a mini UAV. Designed electronics and PCB's for avionics of three different model satellites. Developed embedded software for model satellites. Taken responsibility for the simulation of the swarm drones.
- In 2021 the team has attended four competitions which are (Teknofest) Model Satellite competition organized by Turksat, (Teknofest) International UAV competition organized by Tubitak and Turkish Aerospace [got 5th place amongst 269 competitors], (Teknofest) Swarm UAV competition organized by Havelsan and VTOL UAV competition organized by METU AEE Department in cooperation with Boeing.

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