CURRICULUM VITAE

English (Advanced), **Turkish** (Native), **French** (Pre-Intermediate), **Latin** (Elementary)

Paris, France

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*T*ECHNOLOGIES AND INTERESTS

Technologies: Go, Python, Typescript, Kubernetes, Docker, PyTorch, Linux, React.

Interests: Austrian School of Economics, Music Theory, Piano, Chess, Latin, Lego Technic.

*E*DUCATION

Sorbonne University *Sptember 2022 - Present*
Master of Science in Distributed and Cloud Computing *Paris, France*

· Awarded SFRI Scholarship from Sorbonne University.

Bilkent University *September 2017 - January 2022*
Bachelor of Science in Computer Science and Engineering *Ankara, Turkey*

· Graduated with honors, *summa cum laude*.

*E*MPLOYMENT EXPERIENCE

LIP6 Research Laboratory, Dioptra Team *June 2021 - Present*
Open-Source Contributor / Software Developer *Paris, France*

· Maintaining the open-source *EdgeNet Software* which is a suite of custom controllers written in Go for Kubernetes cluster that serves state-of-the-art computer networking research.
· Improving a proof-of-concept Kubernetes federation extension by optimizing the mechanism for resource cache management.
· Current implementation and experiments are still ongoing, the results will be published in an academic paper soon.

ArgosAI Technology *August 2021 - August 2022*
Research Engineer *Ankara, Turkey*

· Proposed and implemented a novel *Generative AI model* architecture using *Python* and *PyTorch* that is used for dataset generation which significantly reduced the downtime caused by foreign object debris placement on international airports.
· Integrated *Kubernetes* with *KubeFlow* in the office servers that maximized GPU utilization during model training.

Borda Technologies *June 2020 - August 2021*
Full Stack Software Developer *Remote*

· Implemented a full stack task assignment API and frontend using *C# ASP.NET Core* and *Flutter* that is utilized in more than 20+ client hospitals.
· Proposed and implemented a virus infection tracking algorithm using *AWS lambda* backend and *Flutter* frontend for reducing spread in the office environment that is used during the pandemic.
· Selected as one of 4 software engineers among 2500+ candidates in the mentorship program.

Özer Lab (Dr. Sedat Özer) *February 2020 - March 2021*
Research Student *Ankara Turkey*

- Studied 2D and 3D pose estimation to be used to analyze the conditions of athletes participating in sports.
- Studied building damage detection using Satellite Synthetic Aperture Radar images to be used in disaster response.

University of Mississippi NCCHE *July 2019 - August 2019*
Short Term Visiting Scholar *Oxford, US*

- Studied parallel computing algorithms and different libraries used in NCCHE's disaster simulation software.
- Developed a geography-aware navigation API using Python, *GDAL* and *OGR* that solves parallelized travelling salesmen problem.

TECHNICAL PROJECTS

Distributed Card Game in Ethereum Blockchain *October 2023 - November 2023*
Course Project

- Developed and successfully launched an innovative NFT and card trading smart contract in Solidity on a private Ethereum blockchain.
- Created a dynamic and user-friendly React frontend, enhanced with TypeScript, to seamlessly interact with the smart contract functionalities, leveraging the power of the Web3 framework.

Live Container Migration *September 2022 - January 2023*
First Year Master Project

- Designed and implemented a *Kubernetes* extension in *Go* to enable live container migration via *CRIU* and *Containerd*. You can access the final report here.

Pandetect *Sptember 2020 - July 2021*
Graduation Project

- Developed an image analysis API using *Typescript* and *Python* in *Docker* containers to find unmasked people in public spaces during the pandemic.
- Designed and implemented a basic image streaming protocol in *C* for the *ESP32-Cam* microchip to support image streaming using the local network.

Depth-Aware 3D Crowd Pose Estimator *January 2020 - July 2020*
Research Project

- Proposed, implemented and trained an *AI* model using *Python* and *PyTorch* to estimate 3D skeletal poses of people from single shot images of sport events.

Other projects can be found on my *github*.

VOLUNTARY PROJECTS

AIESEC-SAMS18 (Stay a While Make a Smile) *June 2018 - July 2018*
Volunteer *Skopje, North Macedonia*

- Organized tours, activities, and lectures to teach English to unprivileged children in SOS Children's Village in North Macedonia.

Code Education for Kids *November 2018 - January 2018*
Volunteer *Ankara, Turkey*

- Introduced young elementary school students the programming concepts using *Scratch*.

REFERENCES

Prof. Olivier Fourmaux
Director of Master of Computer Science in Sorbonne University *Paris, France*

· My current co-supervisor in LIP6 Dioptra Team.

Assoc. Prof. Timur Friedman
Prof. of Computer Science in Sorbonne University *Paris, France*

· My current co-supervisor in LIP6 Dioptra Team.

Dr. Berat Can Şenel
Senior Software Engineer at Reezocar *Paris, France*

· My supervisor and mentor in LIP6 Dioptra Team.

Prof. Dr. Mustafa Altınakar
Senior Computational Hydroscience Engineer at Argonne National Laboratory *Lemont, US*

· My supervisor and mentor in NCCHE.