UFUK BOMBAR

Paris, France | +33 7 65 84 18 95 | ufukbombar@gmail.com | LinkedIn | GitHub

CIVIL STATUS

Date of birth	10/06/1999
Place of Birth	İzmir, Turkey
Nationality	Turkish
Marital Status	Single

LANGUAGES

Turkish	Native
English	Advanced
French	Pre-Intermediate
Latin	Elementary

PROGRAMMING LANGUAGES

Go	Excellent
Python	Excellent
JS/TS	Intermediate
Solidity	Intermediate
C/C++	Familiar
Java	Familiar
C#	Familiar
Dart	Familiar
PostgreSQL	Familiar

TECHNOLOGIES

Backend Development
- GORM
- JWT
- Postgres
- Redis
- GDAL/OGR
- ArcGIS
- GIT
- .NET
- ExpressJS
- AWS Lambda/S3

Frontend Development
- Electron
- React-Native
- React
- Flutter

Computer Vision
- PyTorch
- Kornia

DevOps and Orchestration
- Kubernetes
- Docker/Podman
- Linux

WORK EXPERIENCE

04/2023 – Present, ***LIP6 Research Lab, Dioptra Team*** Paris, France
Software Developer
- 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.

08/2021 – 08/2022, ***ArgosAI Technology*** Ankara, Turkey
Research Engineer
- 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.

06/2020 – 08/2021, ***Borda Technologies*** Remote, Turkey
Full Stack Software Developer
- 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.

02/2020 –03/2021, ***Özer Lab (Sedat Özer)*** Ankara, Turkey
Research Student
- 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.

06/2019 –08/2019, ***University of Mississippi, NCCHE*** Oxford, USA
Short-Term Visiting Scholar
- 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.

EDUCATION

10/2022 – Present, ***Sorbonne University*** Paris, France
Master of Science in Distributed Computing and Computer Vision
- Awarded SFRI Scholarship from Sorbonne University.

10/2017 – 01/2022, ***Bilkent University*** Ankara, Turkey
Bachelor of Science in Computer Science and Engineering
- Graduated with Honors, *summa cum laude*.

INTERESTS

- Economics and Finance
- Scuba Diving
- Mountain Biking
- Music Theory
- Classical Piano
- Lego Technic
- Latin Language

TECHNICAL PROJECTS

09/2023 – 10/2023, ***Distributed Card Game in Ethereum Blockchain***
Semester 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.

09/2023 – 10/2023***, Live Container Migration***
First Year Master Project
- Designed and implemented a **Kubernetes** extension in **Go** to enable live container migration via **CRIU** and **Containerd**.

09/2023 – 10/2023, ***Pandetect***
Graduation Project
- Developed an image analysis **API** using **Typescript** and **Python** in **Docker** containers to find un- masked 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.

09/2023 – 10/2023, ***Depth-Aware 3D Crowd Pose Estimator***
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 page.

VOLUNTARY PROJECTS

06/2018 – 07/2018, ***AIESEC-SAMS18 (Stay a While Make a Smile)***
English Teacher / Activity Planner / Volunteer
- Organized tours, activities, and lectures to teach English to unprivileged children in SOS Children's Village in North Macedonia.

06/2018 – 08/2018, ***Code Education for Kids***
Code Educator | Volunteer
- Introduced young elementary school students the programming concepts using **Scratch**.

REFERENCES

Prof. Dr. Olivier Fourmaux
Director of Master of Computer Science in Sorbonne University
- My current co-supervisor in LIP6 Dioptra Team.

Assoc. Prof. Dr. Timur Friedman
Professor of Computer Science in Sorbonne University
- My current co-supervisor in LIP6 Dioptra Team.

Dr. Berat Can Şenel
R&D Specialist in Reezocar
- My supervisor and mentor in LIP6 Dioptra Team.

Prof. Dr. Mustafa Altınakar
Senior Computational Hydro Science Engineer at Argonne National Laboratory
- My supervisor and mentor in NCCHE.