### **Ufuk BOMBAR**

☑ ufukbombar.work@gmail.com

Turkish

in Ufuk BOMBAR

🕠 ubombar

Q Ufuk BOMBAR

Communication

Turkish (C2), English (C2), French (B1)

Languages

**4** 1999

Golang, Python, C99, Lua, OCaml, Java, Rust, Bash

Paris, France

About

Computer Engineer and Internet Measurements researcher. Linux, Neovim, and

a Single

hiking enthusiast.



France

Ph.D. Internet Measurements, Sorbonne University, LIP6, 09/2024 - present

EDITE, Sorbonne Université (French public doctoral contract)

Research focus: Measuring Event Impact and Propagation in the Internet.

M.Sc. Distributed Computing and Computer Vision, Sorbonne University, 09/2022 – 09/2024 Awarded SFRI Scholarship from Sorbonne University.

Turkey

**B.Sc. Computer Science and Engineering, Bilkent University**, 10/2017 – 01/2022 Graduated with Honors, *summa cum laude*.

## **Employment**

France

Research Intern, Nokia Bell Labs, 04/2024 - 09/2024

Integrated DISPOSE, a distributed network management platform, with Kubernetes for smart network deployment.

Focused on bridging programmable infrastructure with container orchestration technologies.

Software Developer, LIP6 Research Lab – Dioptra Team, 04/2023 – 04/2024

Maintaining and extending EdgeNet software, a suite of custom Kubernetes controllers supporting cutting-edge networking research.

Contributed to a proof-of-concept Kubernetes federation extension by optimizing resource cache management

Turkey

Research Engineer, ArgosAI Technology, 08/2021 – 08/2022

Designed a generative AI model in Python and PyTorch to reduce downtime from debris detection on airport runways.

Integrated KubeFlow with Kubernetes clusters to maximize GPU utilization during training.

Full Stack Software Developer, Borda Technologies, 06/2020 – 08/2021

Built a full stack task management system using ASP.NET Core and Flutter for 20+ hospitals. Developed a virus infection tracking system with AWS Lambda and Flutter, used during the pandemic. Selected as one of 4 engineers in a competitive mentorship program out of 2500+ candidates.

Research Student, Özer Lab (Sedat Özer), 02/2020 – 03/2021

Investigated 2D/3D pose estimation for athlete analysis and disaster response using satellite radar images.

USA

Short-Term Visiting Scholar, University of Mississippi – NCCHE, 06/2019 – 08/2019 Studied parallel algorithms used in flood simulation tools.

Developed a geography-aware navigation API solving a parallel traveling salesman problem.

# Technical Projects

France

■ EdgeNet – Kubernetes-based Testbed Infrastructure

Contributed to the open-source EdgeNet platform at LIP6, a distributed testbed built on Kubernetes for network research. Maintained core components written in Go and extended the federation layer with optimized resource cache management.

■ Distributed Card Game on Ethereum Blockchain

Developed and deployed a card trading system using Solidity smart contracts on a private Ethereum network. Built a React + TypeScript frontend integrated with Web3.

Live Container Migration – Kubernetes Extension

Implemented a Kubernetes controller in Go to enable live container migration using CRIU and Containerd for dynamic workload relocation.

# **Technical Projects (continued)**

Turkey

#### Pandetect – Mask Detection System

Developed a multi-container image analysis pipeline using TypeScript and Python to detect unmasked individuals during the pandemic. Designed a custom C-based image streaming protocol for ESP32-Cam.

### Depth-Aware 3D Crowd Pose Estimator

Proposed and trained a deep learning model in PyTorch to infer 3D skeletal poses from monocular sports imagery.

Other projects can be found on my GitHub page.

## **Voluntary Activities**

North Macedonia

English Teacher - AIESEC SAMS18

Taught English and organized educational activities for children at the SOS Children's Village.

Turkey

**■** Code Educator – Code Education for Kids

Introduced elementary school students to programming concepts through Scratch-based workshops.

## **Research Publications**



A. Tosun, S. Göktaş, Ş. Yörük, and U. Bombar, "Türkiye izcilik tarihi,"

### References

Available on Request