Ufuk BOMBAR

ufukbombar@gmail.com LinkedIn GitHub Google Research
1999 Turkish Paris, France Single

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

Languages Golang, Python, Bash, C, Rust, Lua, OCaml, Java.

About Computer engineer and internet measurements researcher. Linux, Neovim, and hiking enthusiast.

Education

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*.

Experience

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 (Prof. 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.
- **Kubernetes Extension for Live Container Migration**
  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.

References

Available on Request