

Uğur Yağmur Yavuz

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Education

- 2022– **Doctor of Philosophy**, *Boston University*, Boston, MA.
Computer Science. Advisors: Marco Gaboardi and Alley Stoughton.
- 2021–2022 **Master of Science**, *Dartmouth College*, Hanover, NH.
Computer Science. Advisor: Prasad Jayanti.
- 2017–2021 **Bachelor of Arts**, *Dartmouth College*, Hanover, NH, GPA: 3.97/4.00.
Computer Science and Mathematics. Graduated summa cum laude.
- 2012–2017 **Baccalauréat (diplôme équivalent)**, *Lycée de Galatasaray*, Istanbul, Turkey.

Experience

- 06/2022 – **Research Intern**, *Microsoft*, Redmond, WA.
08/2022 During my internship, I developed a Python tool aimed at extracting bug patching metadata from open-source GitHub repositories using C#. This tool contributed to the development of the InferFix end-to-end program repair framework. I also expanded the functionalities of the Infer static code analysis tool using OCaml.
Skills: Python · OCaml · Static Analysis
- 06/2020 – **Research Intern**, *ISI, University of Southern California*, Marina del Rey, CA.
08/2020 I worked on the improvement of legal testimonial translations from, and the creation of text corpora for low-resource Mayan languages, collaborating with Prof. Jon May and his team, using deep learning libraries and OCR tools. I created two multilingual text corpora for the Mixtec and Kanjobal languages, available open-source.
Skills: Python · Data Scraping · Deep Learning · NLP · OCR
- 07/2019 – **Data Science Intern**, *Tani Marketing & Communication Services*, Istanbul, Turkey.
08/2019 I worked on the task of optimizing customer discount assignments to maximize expected net profit for a prominent Turkish petroleum company, processing and analyzing large datasets using Python and SQL, and utilizing optimization tools like CPLEX and OR-Tools.
Skills: Python · SQL · Machine Learning · Optimization

Presentations

- 01/2024 **POPL 2024**, *Institution of Engineering and Technology*, London, UK.
Co-presented our work on linearizability.
- 11/2023 **NJPLS, November 2023**, *Princeton University*, Princeton, NJ, USA.
Presented our work on linearizability.
- 10/2023 **BU POPV, Fall 2023**, *Boston University*, Boston, MA, USA.
Presented our work on linearizability.
- 08/2023 **VTSA 2023**, *Inria Nancy*, Nancy, France.
Presented our work on linearizability.

Publications

- [1] Prasad Jayanti, Siddhartha Jayanti, **Ugur Yavuz**, and Lizzie Hernandez. *A universal, sound, and complete forward reasoning technique for machine-verified proofs of linearizability*. *Proc. ACM Program. Lang.*, 8(POPL), January 2024.
- [2] **Uğur Y. Yavuz**. *A machine-verified proof of linearizability for a queue algorithm*. Master's thesis, Dartmouth College, May 2022.

Skills and interests

Languages Turkish (native), English (C2), French (C1), Italian (A2)

Technical skills Python, OCaml, SQL, \LaTeX , TLA⁺/TLAPS, EasyCrypt, Coq.

Research interests Concurrent algorithms, formal verification, complexity theory, differential privacy, cryptography, logic.

Hobbies Editing Turkish & English Wikipedias, language learning, trivia, films and film history.