

Mert Bora Alper

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Personal Profile

Final year Computer Science student graduating in 2021. Interested in the back-end, front-end and systems programming (especially networking and security), and data science. Experienced in a variety of languages and frameworks, currently tutoring at the University, and running my start-up. An active open source contributor who got more than 4,000 stars and remotely collaborated with 36 individuals in 5 different open-source projects that I have initiated.

Education

BEng (Hons) Computer Science

The University of Edinburgh

September 2017 - Current

- Grade: 82/100 (1.1 or First Class Honours, expected).
- Courses: Data Analysis, Discrete Mathematics, Natural Language Processing, Data Structures and Algorithms, Machine Learning, Probability, Compiling Techniques, Operating Systems, Computer Security.

International Baccalaureate Diploma

United World Colleges Dilijan

August 2015 - May 2017

- Obtained Grade: 36/45 with 7/7 in Physics and 6/7 in Mathematics.
- Studied in an international high school with 200 students from 60 different countries. Learned Russian and published my first paper in Mathematics.

Experience

Tutor & Demonstrator

The University of Edinburgh

September 2019 - Current

- Tutoring Software Engineering, Functional Programming, Reasoning & Agents, and Object-Oriented Programming courses.

Software Engineering Intern

The University of Edinburgh

June 2020 - July 2020

- Started after my summer internship at Stripe's Dublin office has been cancelled due to COVID-19.
- Collaborated closely with two chemical engineers in the development of a fluid-flow simulator in C++.
- Designed and implemented new features (e.g. first-order chemical reactions, boundary conditions.)
- Refactored the simulator and ported it to Windows.
- Developed unit and integration tests, set up continuous integration pipelines.
- Educated project supervisors about modern C++ development practices.

Advanced Research Unit Intern

Foundation for Armenian Science and Technology

June 2019 - September 2019

- Led the design and development of a semantic search engine for scientific literature and completed in a month.
- Curated the first handwritten Armenian letters dataset, using OpenCV and convolutional neural networks.

Publications

How many values are errors in Go?

June 2019

- Analysed 10 flagship Go projects and showed that 9.8% of the time, developers had to propagate errors manually, and argued that this is inefficient.
- Cited by Herb Sutter, a prominent C++ expert working at Microsoft, in C++ working draft [P0709](#).
- Available online at <https://blog.boramalper.org/how-many-values-are-errors-in-go/>

A New Checksum Formula for Error Detection in Decimal Codes

November 2017

- International Baccalaureate extended essay.
- Surpassed the industry-standard Luhn algorithm by 0.75%.
- Available online at <http://doi.org/10.5281/zenodo.2541761>

Open Source Projects

Newsmail.today

June 2019 - Current

- My small software-as-a-service start-up: an email-based feed aggregator.
- Technologies: Python, Django, JavaScript, Node.js, Redis, PostgreSQL, AWS
- Website: <https://newsmail.today/>

Pydis

February 2019 - March 2019

- An open-source experiment to develop a blazing-fast Redis clone in Python.
- Technologies: Python, asynchronous IO
- 350 stars on GitHub: <https://github.com/boramalper/pydis/>

Magnetico

April 2017 - September 2019

- An open-source BitTorrent search engine suite.
- Technologies: Python (previously), Go, JavaScript (client-side), SQLite
- 2.3k stars on GitHub: <http://github.com/boramalper/magnetico/>

Essential YouTube

June 2016 - July 2016

- Another open-source experiment to design a more user-friendly YouTube interface.
- Technologies: HTML5, CSS3, JavaScript (client-side)
- 100 stars on GitHub: <https://github.com/boramalper/Essential-YouTube/>

Volunteering & Awards

President

Turkish Society at The University of Edinburgh

March 2019 - June 2020

- Organised socials and networking events throughout the year, including the Republic Ball 2020.
- Joined the Society to Association of Turkish Alumni and Students in Scotland.

Edinburgh Award

The University of Edinburgh

November 2019

- Awarded for interning abroad in the summer of 2019 in Yerevan, Armenia.

Scholae Mundi Scholarship

Scholae Mundi Foundation

September 2017 - Current

- Receiving a full scholarship based on my academic achievements, covering my tuition fee and all my living expenses in Edinburgh, from the donors of my high school United World Colleges Dilijan.