

THEODOR-PIERRE MOROIANU

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theodormoroianu



WORK EXPERIENCE

Teaching Assistant

ETH Zürich

Sept 2023 – Dec 2023

📍 Zürich

Teaching assistant for the `Algorithms Lab` and `Network Security` core courses, due to my outstanding results in previous iterations. My role involved preparing and holding weekly exercise sessions as well as the evaluation of students' progress.

Quant Developer Intern

Quadrature Capital

July 2023 – Sept 2023

📍 London

Added `Rust` support to the internal market data pipeline, and implemented a full-stack real-time order book explorer using `Rust`, `Web Assembly` and `React`.

Software Engineer Intern

Jane Street Capital

July 2022 – Sept 2022

📍 London

Implemented a customizable, log-based alert system listening for errors during the processing pipeline of corporate actions, in `OCaml`.

Software Engineer Intern

Citadel LLC

June 2021 – Aug 2021

📍 London

Implemented a full-stack application displaying breaks occurring during the automated post-trading reconciliation process, using `Typescript`, `React` and `GraphQL`.

Software Engineer Intern

Google LLC

July 2020 – Sept 2020

📍 Zürich

Implemented the OOXML (Microsoft Office format) parser for an internal tool used in the analysis of malicious documents sent over Google services, using `C++`, `Bazel` and `Git`.

Competitive Programming Teacher

Bucharest Ultrapformance Program in Informatics

Oct 2019 – June 2022

📍 Bucharest

Teacher of `algorithms` and `C++` courses (3h / week) for high-school students engaged in national and international competitive programming competitions.

Machine Learning Research Intern

Bitdefender

July 2018 – Aug 2018

📍 Bucharest

Five week internship in the ML department, where I developed a program displaying the saliency maps of various neural networks using `PyTorch`.

EDUCATION

MSc in Cyber Security

ETH Zürich

Sept 2022 – present

- Joint degree with EPF Lausanne.
- Receptient of the ESOP scholarship, awarded to 5 people across the entire CS department.
- Majoring in `Cyber Security` and minoring in `Data Management Systems`.

Bachelor of Computer Science

University Of Bucharest

Oct 2019 – June 2022

- Valedictorian of the CS department.
- GPA 10.0 out of 10.0.
- Part of a excellence student programme, with more in-depth courses.

Baccalaureate

International Computer High School of Bucharest

Sept 2015 – June 2019

- Part of a special group focused towards competitive programming.
- My high-school has one of the highest number of international science Olympiads medals in the world.
- GPA 9.99 out of 10.0.
- Baccalaurate grade 9.85 out of 10.

SKILLS

- Advanced in `C/C++`, `Data Structures`, `Algorithms`, `Python`
- Intermediate in `Linux`, `Rust`, `OCaml`, `Git`, `JS/TS`, `HTML/CSS`, `React`, `Java`
- Beginner in `Haskell`
- Others: `Mathematics`, `ML`, `Docker`

AWARDS

Silver Medal – ICPC World Finals

📅 Oct 2021

📍 Moscow, Russia

My team of three won a Silver Medal (8th place) at the ICPC Moscow world finals, representing the University of Bucharest.

First Place – International Collegiate Programming Contest, SWERC

📅 Jan 2024

📍 Paris, France

My team of three ranked 1st in the South-Western Europe regional contest of the ICPC contest, representing our university ETH Zürich. We ranked 2nd to the same contest in 2023.

First Place – International Collegiate Programming Contest, SEERC

📅 Oct 2019

📍 Bucharest, Romania

My team of three ranked 1st in the South-Eastern Europe regional contest of the ICPC, representing the University of Bucharest.

Silver Medal – International Olympiad in Informatics

📅 August 2019

📍 Baku, Azerbaijan

Silver medal at the IOI, the most prestigious Computer Science contest for high-school students.

Gold Medal – Central European Olympiad in Informatics

📅 July 2019

📍 Bratislava, Slovakia

4th place at the Central-European high-school Computer Science Olympiad.

Gold Medal – Balkan Olympiad in Informatics

📅 August 2018

📍 Timișoara, Romania

2nd place at the Balkan Computer Science Olympiad.

First Place – Romanian National Informatics Olympiad

📅 2018 and 2019

📍 Constanța and Suceava, Romania

Twice in a row winner of the Romanian National Olympiad in Informatics.

Third Place – InsomniaHack

📅 March 2023

📍 Lausanne, Switzerland

Third place on the academic leaderboard of the largest Swiss CTF contest, representing EPFL (Federal University of Lausanne).

PROJECTS PORTOFOLIO

SmartForms – AI-Powered Form Parser

github.com/TeamUnibuc/SmartForms

Wrote an app exposing an `API` allowing users to create custom forms and questionnaires. The app is then able to digitize scans of filled questionnaires into an *Excel*-compatible format, using a `CNN` written in `Pytorch`.

SSChat – CLI Chat App

github.com/Unibuc4Ever/SScHat

Wrote a userspace library in `C` for channel-based `IPC` (inter-process communication), using unix `FIFO` pipes. To then showcase the library, I built an app exposing a `CLI` interface allowing users to enter chat rooms and send/receive messages.

Chess Visualizer App

github.com/theodormoroianu/Interactive-Chess-Visualizer

My team of 3 built a web application interactively displaying various chess statistics such as common openings or the ELO evolution of players, as part of a *Data Visualization* course, using `React`, `D3.js` and `Flask`.

LANGUAGES

🇫🇷 **French** – Native

🇷🇴 **Romanian** – Native

🇬🇧 **English** – Fluent (C2)

🇩🇪 **German** – Beginner

HOBBIES

- Ping-Pong
- Ski
- Cooking
- Boardgames
- Sci-Fi reading
- Puzzle solving
- CTF enthusiast
- Former Boy-Scout in both France and Romania (8 years including chief position)