

# THEODOR-PIERRE MOROIANU

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## WORK EXPERIENCE

### Committee Member, MatelInfoUB Admission Contest

#### University of Bucharest

📅 2022 - present

📍 Bucharest, Romania

Key member of the scientific and organization committee of MatelInfoUB, a yearly recurring admission contest organized by the University of Bucharest.

### Teaching Assistant

#### ETH Zürich

📅 Sept 2023 - Dec 2023

📍 Zürich, Switzerland

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, UK

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

### Software Engineer Intern

#### Jane Street Capital

📅 July 2022 - Sept 2022

📍 London, UK

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, UK

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, Switzerland

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 Ultraperformance in Informatics Center

📅 Oct 2019 - June 2022

📍 Bucharest, Romania

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

## EDUCATION

### MSc in Cyber Security

#### ETH Zürich

📅 Sept 2022 - present

- Joint degree with EPF Lausanne.
- Recipient 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 an 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.
- Baccalaureate 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`

## Machine Learning Research Intern

### Bitdefender

📅 July 2018 – Aug 2018

📍 Bucharest, Romania

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

## AWARDS

### Silver Medal – ICPC World Finals

📅 Oct 2021

📍 Moscow, Russia

My team of three won a Silver Medal (8<sup>th</sup> 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 1<sup>st</sup> in the South-Western Europe regional contest of the ICPC contest, representing our university ETH Zürich. We ranked 2<sup>nd</sup> to the same contest in 2023.

### First Place – International Collegiate Programming Contest, SEERC

📅 Oct 2019

📍 Bucharest, Romania

My team of three ranked 1<sup>st</sup> 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

4<sup>th</sup> place at the Central-European high-school Computer Science Olympiad.

### Gold Medal – Balkan Olympiad in Informatics

📅 August 2018

📍 Timișoara, Romania

2<sup>nd</sup> 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).

## LANGUAGES

🇫🇷 French – Native

🇷🇴 Romanian – Native

🇬🇧 English – Fluent (C2)

🇩🇪 German – Beginner

## PORTOFOLIO

### SmartForms – AI-Powered Form Parser

[github.com/TeamUnibuc/SmartForms](https://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 `Computer Vision`.

### SSChat – CLI Chat App

[github.com/Unibuc4Ever/SScHat](https://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](https://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`.