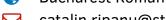
+40771067932

Cătălin-Alexandru Rîpanu



Bucharest Romania



CatalinACS

catalin.ripanu@stud.acs.upb.ro

Computer Science Student

CatalinUPB

Faculty of Automatic Control and Computers

Key skills

• Proficiency in statistics & simulation software:

LTspice (Advanced) Octave/Matlab (Advanced).

- Operating systems: Unix/Linux and Windows.
- Database: Basic knowledge of SQL and good knowledge of Excel.
- Languages: Romanian (native speaker) English (professional level) French (good command)

Programming

- Highly Advanced: **C** (Data structures and Algorithms), Shell/Bash in Linux.
- Advanced: Java/C++ (For OOP).
- In progress: Racket, Haskell, Prolog, Verilog (Hardware)

Massive Open Online Courses

- Machine Learning, by Andrew Ng (on Coursera, in progress).
- Deep Learning, by Andrew Ng (on Coursera, in progress).

Interests

- Quantum Computing.
- Artificial intelligence.
- Cryptography, Cryptanalysis.
- Computational Mathematics/Physics.

Work Experience

2021 – 2022 University Assistant **POLITEHNICA** University of Bucharest,

Taught students Computational Mathematics and Numerical Methods in order to help them acquire skills for analyzing physical phenomena. Used Matlab/Octave.

Projects

Mar 2021 Vim-Text Editor(Linux)

Implemented in C a version of Vim using Queues, Stacks, Linked Lists, Doubly Linked Lists and Lists of Doubly Linked Lists. This program offers the most basic and useful commands such as: undo, redo, quit, delete, replace, etc. It will be available soon on my GitHub Vim-Text Editor.

Tic Tac Toe-Minimax Algorithm(Game Theory) May 2021

Used the Tree/Binary Search Tree Data Structure in C to implement the Minimax AI Algorithm on Tic-Tac-Toe (or Noughts and Crosses) game. Minimax is a decision-making algorithm, typically used in a turn-based, two player games. The goal of the algorithm is to find the optimal next move.

May 2022 Halite(Algorithm Design Team Project)

> Implemented in C++ a Halite bot using algorithm design techniques such as Divide and Conquer, Greedy and Dynamic Programming. The goal of the implementation is to save strength for conquering the entire map. Obtained the $\mathbf{1}^{st}$ prize of the Champions League Competition which took place on 1 June 2022.

Education

2020-Present Bachelor of Computer Science POLITEHNICA University of **Bucharest**

> Coursework: Computer Programming in C/C++, Operating Systems, Data Structures in C, Numerical Methods (Matlab/Octave), Object-Oriented Programming (Java/C++), Network Protocols, Programming Paradigms, Algorithm Analysis/Design, Introduction to Computer Architecture and Assembly Language

Second year GPA: 9.75/10. Expected graduation date: 2024.

Awards and Achievements

Mathematics Student Competition "Traian Lalescu" at Nov-2021 POLITEHNICA University of Bucharest

Participated and obtained the $\mathbf{1}^{st}$ prize of the **Complex Analysis**

section. This section was addressed to 2^{nd} year students.

Mathematics Student Competition "Marcel Rosculet" at May-2019 POLITEHNICA University of Bucharest

> Solved Real Analysis and Linear Algebra problems and obtained the 1^{st} prize. This competition was addressed to 11^{th} grade students from high school.

Activities

Mathematics Student Competition "Traian Lalescu" at Nov-2021 Transilvania University of Brasov

> Participated in the National phase which took place in Brasov on 25-27 November. Obtained the 3^{rd} prize of the **Complex Analysis** section.