

Pângăleanu Cătălin

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Skills

- Languages: C/C++, Java, Python, HTML, CSS, SQL
- Advanced data structures and algorithms
- Object oriented programming and design patterns
- Relational database design and SQL programming
- Java GUI development
- Java robot programming: PID controllers, finite state machines, computer vision, hardware
- Microcontroller programming (familiar with MicroPython)
- IoT programming and protocols

Education

Babeş-Bolyai University, Faculty of Mathematics and Informatics Cluj-Napoca, Romania
Bachelor's Degree in Computer Science Oct 2023–July 2026

- Relevant coursework: Computer Systems Architecture, Operating Systems, Object Oriented Programming, Data Structures and Algorithms, Mathematical analysis, Algebra
- Enrolled in the Google Developer Student Club

Colegiul “Școala Națională de Gaz” Mediaș, Romania
Mathematics–Informatics Student Sept 2019–Jun 2023

- Final grade: 10/10
- Valedictorian out of over 120 students
- Romanian Baccalaureate: 9.75 (Mathematics: 10, Informatics: 9.80, Romanian Language: 9.45)
- SAT: 1530/1600 (Reading and Writing: 730, Math: 800)

Relevant experience

First Tech Challenge (FTC) robotics team

Founder

Team leader 2021–2022

- Led the team to win the Inspire Award in the regional stage, which ranked us first out of more than 60 teams.
- Recruited 15 new members.
- Built relationships with tech companies, set up meetings, and brought them along as sponsors.
- Raised over 10,000 euros in sponsorship deals.
- Developed a pioneering odometry system that effectively combined visual and encoder odometry, distinguishing my team as one of the only ones in the history of the competition to successfully implement this approach.
- Leveraged complex SDK's, programmed hardware, namely motors and sensors, and implemented advanced concepts such as closed-loop controllers and finite state machines in Java, while also maintaining OOP design patterns.
- Developed expertise in Android-based control systems and Android Studio.
- Designed and tested CAD prototypes.

Doobeegood summer camp for displaced Ukrainian children

Volunteer

Aug 2022

- Organized both computer science and robotics workshops.
- Cultivated a warm and friendly environment.
- Fostered the young participants' interest in STEM.

Awards

First Tech Challenge

Inspire Award, regional stage

2022

Nație prin Educație Award, 2nd place, national stage

2022

- My team competed with more than 60 teams in the regional stage, and in the national stage, we faced off against the highest-ranked teams nationwide.

Romanian National Olympiad in Informatics

Silver Medal

2021

- Created computationally efficient algorithms in C++ for a wide range of algorithmic problems.
- Leveraged the C++ Standard Template Library in order to achieve best computational performance.
- Competed with more than 100 of the most skilled students in the field of computer algorithms.

Empowersoft

Second Place

2021

- Solved an extensive range of algorithmic problems in a hackathon-style setting over the course of 24 hours.
- Competed with more than 100 students.

Languages

- Romanian (native)
- English (C2 level)

Certificates

- CAE: C2 level (207/210), Cambridge English
- TOEFL iBT: 108/120, ETS
- Database Design, Oracle Academy
- Database Programming with SQL, Oracle Academy
- Internet of Things, IP Workshop

Additional information

- Available for full-time work from June to September.
- Attended DevTalks Cluj-Napoca 2023.
- As part of the Internet of Things course by IP Workshop, I built a weather monitoring station using microcontrollers, sensors, and servomotors and transmitted the data using the MQTT network protocol.