

# UNGUREANU ANDREI-LIVIU

Bucharest, Romania

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## EXPERIENCE

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### Microsoft, Technical Engineer Intern

Summer 2019

Worked in the Exchange Online team. Developed an internal ticketing platform using Node.js, MongoDB and multiple Microsoft Azure APIs. Also, configured an E5 tenant for Office 365.

## EDUCATION

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### University of Bucharest, Faculty of Mathematics and Computer Science

2018 - Present

Department of Computer Science. Expected to graduate in 2021.

### "Tudor Vianu" National College of Computer Science

2014 - 2018

Informatics intensive classroom. Attended multiple contests in computer science and information technology. Graduated with 10/10 in mathematics and 9.95/10 in computer science.

## SKILLS AND ABILITIES

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- Advanced data structures/algorithms, math, probability and statistics.
- Experienced with C/C++, Python, Java, familiar with C# and JavaScript.
- Good knowledge of Git, Docker, Spring, React, PostgreSQL, MySQL, jQuery, LaTeX.
- Basic knowledge of GraphQL, Microsoft Azure, Google firebase, Django Framework, NodeJS.
- Familiar with Linux, MacOS, PyCharm, MS Visual Studio/Visual Studio Code, Android Studio.

## PROJECTS

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### Process Scheduler, [www.github.com/ProcessSchedulerRoundRobin](http://www.github.com/ProcessSchedulerRoundRobin)

2020

This program enables you to run multiple processes executed by the CPU using the Round-Robin algorithm. Implemented a terminal interface with real time logging about the running processes. This design uses Inter Process Communication (IPC) to schedule the tasks to the CPU.

### Computational geometry visualization, [www.github.com/Computational-Geometry](http://www.github.com/Computational-Geometry)

2019

Developed and deployed a website using JavaScript and Express where I implemented an interface for running convex-hull algorithms. Increased the website's performance by running the algorithms on client-side and using  $O(n \log n)$  complexity for visualizing the results in a modern and responsive UI. The website is live at [www.geometry-canvas.herokuapp.com](http://www.geometry-canvas.herokuapp.com)

### AI that plays Gomoku, [www.github.com/Gomoku](http://www.github.com/Gomoku)

2019

Used Monte Carlo Tree Search to implement an AI that plays Gomoku. I also built a GUI in C++ with SFML library for players to interact with the game. The program is compatible with multiple operating systems: Linux, MacOS, Windows.

### Encryption of images and implementation of pattern recognition algorithm,

2018

[www.github.com/C\\_Image\\_Processing](http://www.github.com/C_Image_Processing)

Developed a C library that features a way to encrypt and decrypt images. To test the performance of the encryption I implemented a chi squared evaluation. Also, the library has a pattern recognition feature that identifies objects in images using template matching.

### Android Application, [www.github.com/Period](http://www.github.com/Period)

2018

Designed and developed a mobile application with 50+ installs using Java for Android. It analyzes data gathered in time and provides results in a modern UI using a RecyclerView.