Teodora Reu

teoreu.github.io | teodora.reu@student.manchester.ac.uk

EDUCATION

UNIVERSITY OF MANCHESTER
BSc. (Hons) in Computer Science and Mathematics
2019-2022 | Expected: 1^{st} class
Modules: Programming in Python, Programming in Java, Data Science, Foundation of Pure Mathematics, Linear Algebra, Calculus and Vectors, First Year Team Project

LIVIU REBREANU COLLEGE
Computer Science and Mathematics
2015-2019 | Bistrita, Romania
Romanian Baccalaureate: Mathematics (10), Computer Science (9.90), Overall grade (9.88)

SKILLS

PROGRAMMING
Over 5000 lines:
• Python • C++ • LaTeX
Over 1000 lines:
• HTML • PHP
Familiar:
• Java • C#

HOBBIES

ARTS
Over 1000 hours:
• Playing Piano or Bass Guitar
• Drawing and painting landscapes, and portraits using software or brush and pen
• Writing short novels or poetry

SPORTS
Over 1000 hours:
• Chess • Table Tennis (6th place at a national competition in 2010)

LEADERSHIP

• I was the leader of the college jazz band and mentor in different school projects (biology, mathematics, computer science, literature research projects)
•Organised a school project in which we took interviews from outstanding individuals from my hometown.

RESEARCH EXPERIENCE

PROMYS | Program in Mathematics for young scientists
15 July 2018 –25 August 2018 | Oxford, UK
- Among 7% accepted European students.
- Rediscovered Number Theory by studying and proving concepts and theorems from first principles.
- Developed my own axioms regarding Number Theory and familiarised with applications of it in many other fields as Group Theory, Game Theory, Cryptography, and Graph Theory.
- Improved my research skills by collaborating on a mathematical paper on Shuffling Cards.
- Participated in my first hackathon and developed in Unity a

COMPETITIONS

FIRST TECH CHALLENGE | Member of Coding Department
January 2018 – May 2018 | Bistrita, Romania
- Built a robot that was able to work in two states: autonomous and human-controlled by a joystick. The robot was able to read colours, and preset images, walk in 8 directions, pick up blocks and throw them upwards.
- Coded in **Java**.
- Won 1st place in Regional Competition.

ASTRO PI CHALLENGE | Developed Raspberry Pi Apps
Jan 2017 – May 2017 | Bistrita, Romania
- Learned how to interface Raspberry Pi with electronic components such as sensors (Gyro, Temperature, Humidity, Camera) or PIRs.
- Displayed all the data gathered on a LED matrix if the temperature and humidity levels were in parameters on the International Space Stations (for example temperature should be between 18.3 and 26.7°C).

AWARDS | Regional and National Competitions
- **Finalist at National Olympiad of Mathematics** (2017-2018)
- Second and third place at Regional Mathematical Competitions (2015-2018)

PERSONAL PROJECTS
- Papers on Inequalities, Geometry and Graph Theory, presented at a mathematical summer school in my country.
- Explored Logic Gates, Lambda Calculus, and Turing Machines, by writing algorithms.
- Developed a 2D platformer in Unity with my own animations called GlobeHead. Coded in **C#**.
- Created graphic designs with **C++** and Geogebra, displaying Mandelbrot Set and other pictures.
- Paper on Euler's Identity in which I explored graphic applications of the formula.
- Developed applications in **Python** such as Spell-Checker, Snake, Sudoku Solvers and others.