Gergely **Csaba**

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Romania, Târgu Mures

LANGUAGES

- Hugarian ●●●●●
- English ●●●●○
- Romanian ●●●●○
- German ●●○○○

Education

High School (2012-2016)
"Márton Áron" National College, Miercurea Ciuc
In high school, I studied computer science and mathematics.

University (2016-2020)
Politehnica University of Timişoara,
Electronics, Telecommunications and Information Technology
I studied Electronics and Telecommunications, where I gathered a lot of programming and electronics knowledge.

Employment

Student (2018-2020)
Symph Electronics, Timișoara
During university, I worked for Symph Electronics for 2 years. The company was engaged in designing, assembling PCBs, and programming the final product. Given the company's size, I primarily focused on PCB design and programming. The programming tasks were carried out using C.

Automation Engeneer (2020.09-2023.01)
Engmatec Gmbh- Engmatec S.R.L, Radolfzell-Miercurea Ciuc
I was doing commissioning and programming industrial production line controllers (PLC) for companys such Continental, Bosh, Hella, BHTC in five different languages, C was one of them.

Automation Engeneer (2023.02-2023.12)
Controlsoft-Automatika Kft.- Controlsoft Automatizare SRL., Veszprém-Miercurea Ciuc
I programmed PLCs for water utility systems and successfully commissioned them.

Project Manager (2024.01-Present)
Controlsoft Automatizare SRL., Miercurea Ciuc
I manage projects from the bidding process to the final deliverable.

Main Software Projects

AI Flappy Bird (python)

Initially, I programmed a classic Flappy Bird game from scratch, implementing the essential mechanics that allowed the bird to jump and maneuver towards the pipes in response to keyboard inputs. Just like in the classic Flappy Bird game, scoring occurred when the bird successfully passed through the gap between pipes without colliding with any obstacles. Once this foundational aspect was perfected, I advanced to the next level by integrating AI into the game. Utilizing the NEAT (NeuroEvolution of Augmenting Topologies) algorithm, I enhanced the existing codebase to create a bird capable of learning and mastering the game, ensuring it never fails. This involved significant development efforts to ensure the AI receives accurate information and makes informed decisions while playing.
During this project I learned about:

- AI in general
- NEAT algorithm
- OOP

Multiplayer (server-client) Rock-Paper-Scissor Game (python)

It is a classic rock-paper-scissors game where two players can play against each other. At first, it seems like a silly game, but I encountered the most headaches so far during its development. After I created the single-player version of the program, I had to address the following questions: How will it run with two (or even more) clients simultaneously? How do I handle it if only one player quits the game? How do I keep track of which client has made a move? What will happen if the communication stops?
In the end, I succeeded in answering these questions and created a fully functional multiplayer rock-paper-scissors game.

During this project I learned about:

- Threading
- Server-client relation and how to create them
- Network communication
- OOP

For more projects including procect code, please check out my portfolio website: https://gercsaba.github.io/Website/