

Splendor Project – Experience Report

Leonardo Melodia

At the beginning of the Splendor project, I was really excited. I had been looking forward to doing a group project with my team for a long time, and this was finally the chance to make that happen. It turned out to be a really interesting experience, but also quite a challenging one.

My first major task was implementing the User Management system, which I worked on together with Lukas Ott. I was involved in designing and building the whole backend side of the system. It was a great experience diving into the architecture and figuring out how everything worked. Seeing it come together and function properly was very satisfying and gave me confidence for the tasks ahead.

After completing the User Management, I wanted to understand what the rest of the team had been working on. However, I quickly realized how complex everything had become. I found it hard to see how all the pieces fit together — what each part did, how they interacted, and why certain decisions were made. There were a lot of question marks in my mind. But over time, by asking questions and following along more closely, things began to click and I gradually got a better understanding of the overall system.

Later in the project, I took on a central role in developing the AI client. This included working on the UI, but more importantly, implementing the AI algorithms for the Easy, Medium, and Hard bots. Lukas supported me by building the infrastructure for determining all legal moves during a turn, which allowed me to focus on creating strategies without worrying about breaking the rules of the game.

At first, I felt pretty lost. I didn't know how to approach the problem or where to start. I considered using more advanced techniques like tree search algorithms, but in the end, I decided to rely on logical, human-like strategies based on how I would personally play the game. That ended up being the most enjoyable part of the project — coding bots that reflected my own playstyle and seeing them work effectively.

One challenge I faced was that the Medium bot was performing just as well, or sometimes even better, than the Hard bot. That didn't make sense at first, but after some investigation and reworking, I managed to adjust the logic so that there was a more noticeable difference in difficulty between the levels.

Overall, I found the project very rewarding. It was fun, challenging, and a great learning experience. I even started to really enjoy the game Splendor itself. The mix of teamwork, technical problem-solving, and game logic made it one of the most engaging projects I've worked on so far, maybe because it was the first one.