Joshua Moelans

Education

University of Antwerp
Master in computer science - Software Engineering
Graduated Magna Cum Laude, June 2024

Thesis Title: *An Automated Approach to Behavior Space Exploration:*
A Proof-of-Concept for Game Development

Extracurricular Activities: *Student representative, member of the computer science advisory board*

Bachelor in computer science
Graduated Cum Laude, June 2022

Work experience

Sentry.io - Vienna, Austria
Newgrad Software Engineer
September 2024 - present

University of Antwerp - Antwerp, Belgium
Student Software Developer
May 2023 - August 2024
- o Improving workflow of keylogger tool for scientific research
- o Added dynamic writing-source graph visualization

Keysight Technologies - Ghent, Belgium
R&D intern
July 2023 - September 2023
- o Working on proof-of-concept passive component synthesis flow in ADS through Python

Open Summer of Code / NCCN - Brussels, Belgium
Student Software Developer
July 2022
- o Designed and built a portable front-end application to live-track critical goods
- o Re-engineered networking code for performance increase

Volunteering

Hujo (Sesam Open-IT)
2021 - 2024
- o Teaching children STEM by introducing them to code using Lego Mindstorms
- o Developing programming interface for Arduino Uno robot programming

University of Antwerp (Tutoraat)
2020 - 2023
- o High school maths and programming (C++) tutor

Skills

Programming Languages: C++, Python, JavaScript, C#, Java
Technologies: Flask, Git, PostgreSQL, JUnit, PyTest, QT, .NET
Languages: English (full professional), Dutch (native), German (basic), French (basic)

Projects

Block-based programming interface | Python, JavaScript | solo project
- o Designed and implemented a block-based programming web-interface from scratch
- o Created a compiler, translating block networks into code, driving an Arduino uno-controlled robot

Recommendation algorithm explorer | Python, JavaScript, PostgreSQL | team lead
- o Created a web-app to compare recommender-algorithms, allowing for use of custom data sets
- o Leading a team of 5, planning out work and keeping track of progress
- o Designed and implemented the database and accompanying front-end interactions

Model-driven Port Simulator
- o Designed domain-specific language modelling maritime transport
- o Created 3d-rendered visual representation of simulator components
- o Work was presented to the Port of Antwerp-Bruges