

# MARTIN BLOM

## Master's Student in High-Performance Computer Systems

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Gothenburg, Sweden

in Martin Blom

Marre-B

## CODING

Java: Familiar

Java/Type -Script: Familiar

C: Basic

Python: Experienced

C++: Experienced

C#: Experienced

MongoDB: Familiar

SQLite: Experienced

QT Widgets: Experienced

## LANGUAGES

Swedish: **Native**

English: **Proficient / Fluent**

Croatian: **Basic knowledge**

## LICENSES

### Driver License

October 2019

- B + AM

### Forklift License | TLP10

February 2022

- A1, A2, A3, A4, B1, B2, B3, B4

## REFERENCES

References can be sent upon request.

## ABOUT ME

I'm a very happy, outgoing and generally knowledgeable person. I have a big interest in computers, programming and other tech, which plays a big part of my everyday life. At the moment I'm studying my second year of my masters in High Performance Computer Systems at Chalmers University of Technology, and looking for a future within the software industry. Using the large number of elective courses in my masters program I have tailored it towards software development and optimization. I have also focused on courses with projects to further develop my practical skills and experience.

## EDUCATION

### Computer Science | University

August 2020 – Present

Gothenburg, Sweden

Attending **Chalmers University of Technology**

Bachelor's Degree in Computer Science and Engineering (August 2020 – July 2023)

Master's Degree in High-Performance Computer Systems (August 2023 – Present)

Relevant Courses: Computer Architecture, Game Engine Architecture, Data Structures and Algorithms, Object-Oriented Programming, Machine-Oriented Programming, High-Performance Parallel Programming, Advanced Computer Graphics, Artificial Intelligence

## EXPERIENCE

### Volvo Car | Software Developer

May 2024 – August 2024

Gothenburg, Sweden

My work at Volvo Cars was as a summer intern supporting the Technical Leader of a team of around 15 people, in coding and processing data/models. During my time in this position I single handedly wrote and developed a Python application for inhouse use as a database and data visualizer, to help improve the teams CFD workflow. The application was developed using mainly python libraries: SQLite and QTWidgets. During my time here I learned a lot about fullstack development and troubleshooting/optimization by finding and fixing slow calls to GUI functions.

### Wanda Sweden | Gothenburg Representative

October 2022 – May 2024

Gothenburg, Sweden

Wanda opened their first warehouse in Gothenburg in October of 2022 and I was the first on-site employee. From there on I had the main responsibility for our operations in Gothenburg. Aside from the regular work was I was tasked with vetting and educating new employees as well as making sure everything around the warehouse and our services kept working. Since August of 2023 I also had the responsibility of route planning/capacity management for all of the warehouses in Sweden. At Wanda I developed a lot of experience in having big responsibilities and being in charge of overseeing large operations.

### Volvo Car Retail (Consultant - Manpower) | Customer Service Agent

May 2022 – September 2022

Gothenburg, Sweden

At Volvo I was responsible of smoothly and with great creativity handling every day issues. These issues involved a very broad work area with a lot of problem solving and customer service. Usual task could include, ordering extra parts, making a workshop reservation, receiving and giving out rental cars as well as arranging test drives of both new and used cars.

# PROJECTS

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## Traffic Simulator | [Visit Repo](#)

📅 2023 – 2024

- Developed using C# in Unity

This project was the main work of my Bachelor's thesis and aims to simulate traffic flow using an agent based system. The application features autonomous vehicles driving around a road network that can either be created by the user, or imported from a real world location.

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## Game Engine | [Visit Repo](#)

📅 2024

- Developed using C++ and OpenGL

A 3D Game Engine with built in editor, written from scratch using OpenGL for graphics. Notable features:

- Physics Engine (Frame-rate independent)
  - Serialization
  - Scripting
  - Multiplayer
  - Graphical Interface Editor
  - Dynamic/Event based Input System
- 

## Raytracing in DirectX12 | [Visit Repo](#)

📅 2024

- Developed using C++/CUDA (DirectX12)

A realtime raytracing rendering engine using DirectX12. Notable features:

- Hardware accelerated raytracing
  - Ray traced ambient occlusion
  - Transparent and reflective materials
  - Procedural terrain generation
  - Various basic compute shaders
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These projects were completed in teams of 4 to 7 members, providing me with valuable experience in managing larger-scale initiatives and coordinating parallel or simultaneous development efforts.