



MAX GUICHARD

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Low-level enthusiast. Trilingual (English, French and Spanish).

EDUCATION

Delft University of Technology, Bachelor's in Computer Science and Engineering

September 2021 - June 2024

GPA: 8.9 / 10

Systems track: Digital Systems, Embedded Software, Operating Systems

Courses:

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|-------------------------------------|----------------------------------|-------------------------------------|
| • OOP | • Reasoning and Logic | • Information and Data Management |
| • OOP Project | • Algorithms and Data Structures | • Machine Learning |
| • Software Quality and Testing | • Computer Organization | • Computer Graphics |
| • Calculus | • Computer Networks | • Digital Systems |
| • Linear Algebra | • Web and Database Technology | • Concepts of Programming Languages |
| • Probability Theory and Statistics | | |

SAMPLE PROJECTS

RayC | C

RGB ray marcher programmed in C from scratch using SDL2. Outputs renders into PNGs. Supports soft shadows, reflections, spheres, planes and point lights. Stemmed from a ray casting project (similar to Wolfenstein3D), with the knowledge being concretized by our Computer Graphics course.

Lamb | Python

Lamb is a turing-complete, imperative, procedural programming language that can be interlaced with any other language or text. It supports a scalable syntax using a custom PRATT parsing stage. It currently supports basic types (strings, integers, lists), functions (macros) and recursive calls.

Logic-level Circuit Simulator | C

A logic gate level simulator using a discrete time-driven event system. Powered using a custom dynamic array library. Has an incomplete UI written directly using the Win32 API.

QOI Decoder | C

The Quite Okay Image format decoder is an exercise in specification adherence and low-level bit and file manipulation. It uses SDL2 to display the decoded RGB images, but is otherwise made from scratch.

Web Scraping | Python

Web scraping in Python for tasks such as: detecting update to website offers, reading and extracting data from articles and automating web tasks. Integration with the IMAP protocol and Google APIs (gmail, google docs, excel) to deliver live updates.

SKILLS / KEYWORDS

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|----------------|--------------|------------|
| • C/C++ | • Rust | • HTML/CSS |
| • Python | • Javascript | • NumPy |
| • x86 Assembly | • Scala | • Linux |
| • Java | • VDHL | • Node.js |

PERSONAL

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|---|--------------------------------|
| • Avid rockclimber: bouldering, top-rope and lead | • Take any opportunity to hike |
| • Mesmerized by bicycles | |