

Luis Valero

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<https://luisvalerodelai.github.io/website/> |

EDUCATION

Bachelor of Science, Data Science & Artificial Intelligence

2024 – 2027

Leiden University GPA: 8.94/10 *Relevant Coursework:* Reinforcement Learning, Neural Computing, Data Structures & Algorithms, Databases, Math Structures in CS (topology, manifolds, category theory)

International Baccalaureate

2022 – 2024

International School of Helsinki

Relevant Coursework: Mathematics Analysis & Approaches (HL), Physics (HL)

EXPERIENCE

Teaching Assistant

Oct 2025 – Present

Leiden University

- Teaching assistant for Data Structures & Algorithms, Probability Theory for CS, and Fundamentals of Programming

Research Assistant

Mar 2025 – Sep 2025

Leiden University

- Conducted data preparation & analysis under Dr. M.L. Vives Moya
- Performed sentiment analysis on LLMs with induced psychopathologies

Research Intern

2022

UN University – WIDER

- Developed automated data analysis pipeline for PhD thesis, reducing week-long workload to 3-hour process
- Analyzed & cleaned Global Competitiveness Index dataset

PROJECTS

OtaOS – Custom Operating System

- Built fully functional OS with GRUB bootloader, VGA & keyboard drivers, multi-task scheduling
- Implemented custom PCI device detection similar to Linux's lspci command

START Compiler – x86 Compiler

- Open-source x86 compiler for educational programming language START used at Leiden University

Cell Segmentation Toolkit

- Voice-controlled cell segmentation tool for AI & Robotics challenge at Leiden University

Other Projects

- **DQNKit**: Collection of DQN algorithms with various replay buffer implementations
- **8-bit CPU**: Programmable CPU designed in Logisim with custom instruction set architecture
- **Phase Space Explorer**: Fractal phase space exploration of discrete dynamical systems

SKILLS

Languages: English, Spanish, Catalan (fluent); Finnish, French, Dutch (conversational)

Technical: Python, C, C++, x86 Assembly, Reinforcement Learning, Computer Vision, OS Development