Luis Valero

https://github.com/lluisvalerodelai | https://linkedin.com/in/luis-valero-b00896230 |
https://lluisvalerodelai.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

- **Data Structures & Algorithms** (Feb 2026 – Jun 2026, Ongoing)
- **Probability Theory for Computer Scientists** (Mar 2026 – Jun 2026, Ongoing)
- **Fundamentals of Programming** (Oct 2025 – Jan 2026)

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

Minispark – Miniature Apache Spark Clone

- Miniature Apache Spark clone for Raspberry Pi Cluster

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++, Scala 3, Data Analysis