

# Luis Valero

<https://github.com/lluisvalerodelai> | <https://linkedin.com/in/luis-valero-b00896230> |  
<https://lluisvalerodelai.github.io/website/> |

## EDUCATION

<b>Bachelor of Science, Data Science &amp; Artificial Intelligence</b> <i>Leiden University</i>	<b>2024 – 2027</b> GPA: 8.94/10
<b>International Baccalaureate</b> <i>International School of Helsinki</i>	<b>2022 – 2024</b> <i>Relevant Coursework:</i> Mathematics Analysis & Approaches (HL), Physics (HL)

## EXPERIENCE

<b>Teaching Assistant</b> <i>Leiden University</i>	<b>Oct 2025 – Present</b>
<ul style="list-style-type: none"><li>• <b>Data Structures &amp; Algorithms</b> (Feb 2026 – Jun 2026, Ongoing)</li><li>• <b>Probability Theory for Computer Scientists</b> (Mar 2026 – Jun 2026, Ongoing)</li><li>• <b>Fundamentals of Programming</b> (Oct 2025 – Jan 2026)</li></ul>	
<b>Research Assistant</b> <i>Leiden University</i>	<b>Mar 2025 – Sep 2025</b>
<ul style="list-style-type: none"><li>• Conducted data preparation &amp; analysis under Dr. M.L. Vives Moya</li><li>• Performed sentiment analysis on LLMs with induced psychopathologies</li></ul>	

<b>Research Intern</b> <i>UN University – WIDER</i>	<b>2022</b>
<ul style="list-style-type: none"><li>• Developed automated data analysis pipeline for PhD thesis, reducing week-long workload to 3-hour process</li><li>• Analyzed &amp; cleaned Global Competitiveness Index dataset</li></ul>	

## 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