

Arnau Neches Vilà

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EDUCATION

The University of Sydney

Aug. 2025 - June 2026

Exchange Student: Mathematics and Computer Science | GPA: 95/100

- **Courses:** Deep Learning, Natural Language Processing, Computer Science Capstone Project, Operating Systems Internals, Financial Derivatives, Nonlinear ODEs with applications, Complex Analysis, Differential Geometry.

University of Seville

Sept. 2022 - May 2027

Double Bachelor Degree in Mathematics and Computer Science | GPA: 9.2/10 (Top 5%)

- **Relevant Computer Science Coursework:** Data Structures & Algorithms, Intelligent Systems & Artificial Intelligence, Software Engineering & Databases, Computer Architecture & Networks.
- **Relevant Mathematics Coursework:** Optimization, Probability Theory & Statistics, Numerical Calculus, Discrete Mathematics, Linear Algebra, Multivariable Calculus, Real Analysis, Abstract Algebra.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, SQL, C, MATLAB, AMPL, Assembly (RISC-V).

Web & Software: FastAPI, Tailwind, React, HTML5/CSS3.

AI & Data Science: PyTorch, Scikit-Learn, Pandas, Matplotlib, Time Series Analysis.

Tools: Git, Docker, Wireshark, LaTeX.

RELEVANT EXPERIENCE

MINERVA AI (University of Seville) | Research Assistant

July 2025 - Present

- Researching time-series forecasting and attribute selection in Python; engineered a custom feature selector which achieved a 15% MSE reduction over the baseline model.

ACOPLAN | Technical Assistant

June 2023

- Processed and cleaned large-scale datasets for photovoltaic energy projects to produce a published report.

PROJECTS

[Accessible Activity Data Platform \(Capstone\)](#) | Python, Flask, PostgreSQL, Gemini API

- Led a 7-person team to build a microservice-based web platform for a real-world client, automating data discovery and replacing legacy Excel processes with an AI-powered scraping pipeline.

[Weekly Planner Full-Stack App](#) | FastAPI, React, PostgreSQL SQLAlchemy

- Developed a task management system with a RESTful API and relational schema, implementing complex task-positioning logic and automated data persistence.

[Operating Systems Internals \(USYD\)](#) | C, POSIX Threads, Linux

- Implemented a multi-level feedback queue dispatcher and thread synchronization systems using mutexes to manage priority scheduling and shared resources.

COMPETITIONS AND SCHOLARSHIPS

Competitive Programming: National Finalist at Ada Byron (2024, 2025); consistently ranked in top tiers of university-level algorithmic contests (CompliCAUS, University of Seville Algorithmic Club).

Sputnik Scholar ("Los 300"): Selected for a prestigious tech-entrepreneurship grant and bootcamp focused on startup scaling, MVPs, and emerging technologies.

OTHERS

Languages: Spanish & Catalan (Native), English (C2 Proficiency - Cambridge Scale: 202).