Nicolas Serrano García

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Education

University of Alicante — Alicante, Spain
BSc in Computer Engineering — *Sept. 2024 – Present*

Relevant coursework: ARA group
Grade: 8/10

University of Sydney — Sydney, Australia
Study Abroad Program — *Feb. 2026 – Jun. 2026*

Projects

Ninttp — Ongoing Personal Project
C++20 Networking Library | C++, CMake, POSIX Sockets, TCP/IP

- Developing a C++20 header-only networking library as a foundation for an easy-to-use HTTP server-client library.
- Implemented move-only socket abstractions with RAII-style resource management and explicit close/shutdown operations.
- Built TCP stream socket wrappers supporting bind, listen, accept, connect, send and receive operations over native sockets.
- Designed IPv4/IPv6 endpoint abstractions and compile-time host/network endianness utilities.
- Structured the project with CMake to make it reusable from other projects.

nincpu — Ongoing Personal Project
Digital CPU Design | Logisim Evolution, Computer Architecture

- Designing a simple CPU architecture using digital circuits in Logisim Evolution.
- Split the design into separate ALU, memory, control unit and main integration circuit files.
- Built lower-level arithmetic components including a full adder, a 16-bit adder and a 16-bit adder/subtracter.
- Developed register and memory-oriented circuits using 16-bit register components and multi-register composition.

DeskUp — Personal Project
Desktop Application | C++, Qt/SDL, X11, Win32, AppImage, Inno Setup

- Built a desktop application to recover recently used workspace tabs from a centralized app.
- Integrated OS-level APIs, including X11 and Win32.
- Designed the project to learn the software lifecycle, including CI/CD workflows.
- Created cross-platform installers using AppImage and Inno Setup.

Additional Learning

- *C++ Concurrency in Action* – Anthony Williams — Code lab
- *C++ Memory Management* – Patrice Roy — Code lab

Skills & Interests

Technical: C++, CMake, Google Test, Git, POSIX sockets, x86, MIPS, Qt, SDL, Doxygen, AppImage, Inno Setup

Languages: Spanish native, English C1 Cambridge, Valencian C1

Interests: Drums, camping