Paolo Tonelli

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Experience

Visiting Research Scholar, UCSB – Santa Barbara, CA March 2025 – August 2025

- Designed a FPGA accelerator for Tensorized Neural Networks, demonstrating 3x faster inference compared to CPU implementations in preliminary simulations.
- Investigated Processor-In-Memory (PIM) architectures and evaluated energy-performance trade-offs.

Undergraduate Research Assistant, UCSB – Santa Barbara, CA March 2024 – August 2024

- Developed a hardware-aware deep learning framework for solving partial differential equations on resource-constrained devices, leveraging tensor compression and quantization techniques.
- Achieved a 92% reduction in model size while maintaining prediction accuracy within 1.7% of the baseline.

Private Tutor – Sicily/Padua, Italy September 2021 – August 2023

- Provided one-on-one tutoring to high-school students in mathematics, physics, and latin.

Education

University of California, Santa Barbara – MS in Computer Engineering September 2025 – June 2027

- **GPA:** N/A

University of California, Santa Barbara – Exchange Abroad Program September 2023 – June 2024

- **GPA:** 3.61/4.00
- **Coursework:** Advanced Verilog Design, Control Systems, Scientific Machine Learning

University of Padua, Italy – BS in Electrical Engineering September 2021 – November 2024

- **Final grade:** 110/110 cum Laude
- **Coursework:** Physics, Multivariable calculus, Linear Algebra, Analog and Digital Electronics

University of Padua, Italy – Medical School

- **Coursework:** Biophysics, Molecular biology, Chemistry, Anatomy, Physiology
- *Transitioned to EE before obtaining medical degree*

Languages and Skills

Italian: Native Speaker
English: Fluent (IELTS 8.5/9.0, CEFR C2)
Skills: SystemVerilog, VHDL, C, Python

Volunteering and Interests

UCSB Excursion Club – Staff Member

- Organized and led numerous backpacking and camping trips by planning routes, securing permits, arranging transportation and gear, and enforcing safety protocols.