

Pietro Comin

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SUMMARY

Computer Science student (UFPR) with a focus on Artificial Intelligence and product vision. Undergraduate Researcher in Deep Learning, applying Convolutional Neural Networks (CNNs) to analyze activation functions. Seeking an internship opportunity to develop cutting-edge AI solutions and contribute to the full product lifecycle, from technical conception to user value delivery.

WORK EXPERIENCE

Finance & Administration Board Member

Apr 2024 - Dec 2024

– **ECOMP - Junior Enterprise in Computing**, Curitiba, Brazil

– Led a research initiative on financial investment strategies, presenting a feasibility study to the board aimed at optimizing the organization's capital allocation.

– Analyzed project contracts and cash flow data to support the directorate's strategic financial planning.

RESEARCH EXPERIENCE

Undergraduate Researcher - Deep Learning

Aug 2024 - Present

– **Federal University of Paraná (UFPR)**, Curitiba, Brazil

– Investigating the impact of the ReLU activation function's non-differentiability point on neural network training dynamics and performance.

– Developing and training Convolutional Neural Networks (CNNs) on the MNIST and FashionMNIST datasets to analyze gradient flow during backpropagation, utilizing Python.

PROJECTS

Shooter Born in Heaven (2D Game Engine)

C & Allegro 5

Engineered a complete Run 'n Gun game (50 hrs), featuring a parallax scrolling renderer, state-machine animations, and an advanced, multi-phase boss AI.

MIPS-based Vector Processor

Computer Architecture

Designed and implemented from scratch a simplified MIPS vector processor, contributing to gain of experience in the hardware-software interface and low-level computer organization.

HONORS & AWARDS

Award of Merit

National High School Model United Nations (NHSMUN)

New York, 2022

Calculus II Honors

Indepth calculus II lessons

2024

EDUCATION

2024 - 2027 (Expected)

Federal University of Paraná (UFPR)
Bachelor of Science in Computer Science

Curitiba, Brazil

SKILLS

Languages

Python, C, C++, Java, LaTeX

AI/ML

PyTorch, Scikit-learn, Pandas, NumPy, CNNs, Deep Learning Theory

Developer Tools

Git, GitHub, Linux, Makefiles, GDB, logisim-evolution

Languages (Spoken)

Portuguese (Native), English (Fluent, C1), Spanish (Basic)