# MARCO MINETTI

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## EDUCATION

**Bachelor of Computer Science** — Expected May 2028
**Purdue University Northwest** - Hammond, IN — **GPA: 4.0** Dean's List
**Diploma in Computer Science -** E. Agnelli - High School - Turin, Italy — July 2024

## SKILLS

- Coding Language: Java - JavaScript - C - C# - C++ - Svelte - PHP - SQL - CSS - HTML - Database creation - Python - Unreal 5 - Unity - GitHub - Linux - Creation of networks on Cisco
- Language: native Italian, fluent English.

## WORK EXPERIENCE

Computer Science Intern — Summer 2025 - 2 months (full-time)
**Virtualitics** - Los Angles, California

- Built 2 Python automation tools and 2 GitHub Actions workflows to streamline testing and deployment.
- Optimized C# code in Unity for an AI/ML visualization application, improving performance and usability.

Computer Science Intern — Summer 2023 - 2 months (full-time)
**Sirius S.R.L, Energy Automation** - Turin, Italy

- Developed a YouTrack-integrated WebApp (Svelte + C# REST API) with Gantt chart visualization.
- Collaborated on internal employee tools, enhancing usability and workflow efficiency.
- Used Svelte.js for both front-end and back-end and C# for the REST API to connect to YouTrack.

Computer Science Intern — Summer 2022 - 2 months (full-time)
**Links Management & Technology** - Lecce (Apulia), Italy

- Created a gamified mission app (Vue.js) enabling users to earn rewards through real-life tasks.
- Partnered with developers to design and ship end-to-end (front and back-end) features in Vue.js.

## RESEARCH EXPERIENCE

**Undergraduate Researcher - Machine Learning |** Purdue University Northwest — Spring 2025 to present
*Multivariable Calculus in Backpropagation: A Deep Dive into Neural Network Training*

- Researching mathematical optimization and backpropagation in neural networks using multivariable calculus.
- Studying gradient flow, loss landscapes, and convergence behavior in ML models.
- Applying theory through Python experiments and model analysis.

## PROJECT WORK

**Trader Analyzer - C Project:** — Spring 2025

- Built real-time trading analysis tool in C using linked list.
- Processes up to 10 years of historical price data from CSV/API sources.
- Processed live market data via API and analyzed patterns like SMA, volatility, min/max value.
- Optimized performance with OpenMP achieving more than 2x speedup.

**Gatekeeper - Project for Computer Science club:** — Fall 2024 to present

- Developing 2D multiplayer board game with Unity supporting up to 4 players.
- Designed Mechanics/UI with team and managed code via GitHub.
- Implement gameplay features and optimized performance.

**Hide and Seek - Solo Project:** — Fall 2024

- Created 3D multiplayer Hide & Seek game in Unreal Engine.
- Implemented matchmaking, roles, and game modes with replication.
- Build optimized 3D environments and responsive controls.

## EXTRACURRICULAR EXPERIENCE

**QuantumLeap Club** - Treasurer | *5 meetings/month* (events, projects, hackathons) — Spring 2024 - Present
**PNW STEM Student Union Club** - Officer | *1 meeting/month* (STEM outreach) — Spring 2024 - Present
**Investments Club** - Vice President | *1 meeting/month* (markets and portfolios) — Fall 2024 - Present
**Computer Science Club** | *4 meeting/month* (talks and projects) — Fall 2024 - Present
**Programming Competition Club** | *2 meeting/month* (problem solving) — Fall 2024 - Present
**Mathematics and Statistics Club** | *2 meeting/month* (math sessions) — Fall 2024 - Present

## RELEVANT COURSEWORK

Multivariable Calculus, Programming II : Java, System in C, Data Structure, Comp Arch & Assem Lang