# Eric Ristol

AI Student

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## PROFILE

AI student with hands-on experience building end-to-end machine learning projects spanning NLP, computer vision, reinforcement learning, and anomaly detection. Balancing a strong theoretical foundation (C programming, linear algebra, calculus) with practical skills (PyTorch, HuggingFace, scikit-learn). Three years of work experience in logistics alongside studies, including a promotion to office operations. Now fully focused on AI, achieving top-of-class grades.

## EDUCATION

**BSc Artificial Intelligence** — Sept 2026 - present

Universitat Autonoma de Barcelona (UAB)

- Covers the full AI spectrum: strong math and theory, cognitive science, and applied engineering. Project-based learning.

**Machine Learning Specialization** — July - Aug 2025

DeepLearning.AI / Stanford (Coursera)

- Andrew Ng's three-course specialization: supervised learning, advanced algorithms, and unsupervised learning.

**BSc Artificial Intelligence and Data Science** — Sept 2025 - June 2026

La Salle Campus Barcelona (Universitat Ramon Llull)

- Systems-level focus: C programming, computational infrastructure, algorithms, data structures, probability and statistics, calculus, linear algebra, and computational logic. Top of class grades.

**BSc Artificial Intelligence (Applied)** — Sept 2024 - June 2025

IU International University of Applied Sciences

- Applied AI curriculum: machine learning fundamentals, Python, mathematical analysis, and hands-on project work. Completed alongside full-time employment.

**Bachillerato** — Sept 2022 - June 2024

Sabadell, Barcelona

- Spanish university entrance qualification. Completed while working full-time.

## WORK EXPERIENCE

**Logistics Office / Warehouse Operative** — Sept 2022 - Sept 2025

Hydac Technology, Barcelona

- Started in warehouse operations handling inventory, shipping, and receiving.
- Promoted to logistics office after 6 months, managing order processing, stock coordination, and supplier communication.
- Worked full-time alongside Bachillerato and first year of university studies.

## SELECTED PROJECTS

**Sentiment Classifier** (DistilBERT + LoRA)
Fine-tuned DistilBERT with LoRA (0.3% params, ~1 MB adapter). Live demo on HuggingFace.

**ResNet-20 from Scratch** (PyTorch)
Full reimplementation from He et al. 2016. BasicBlock, residual connections, batch norm, all written by hand.

**Credit Card Fraud Detector** (Unsupervised)
Anomaly detection on 284K transactions (0.17% fraud). Isolation Forest, LOF, One-Class SVM.

**CartPole Q-Learning** (Reinforcement Learning)
Tabular RL agent that learns to balance a pole over 10,000 episodes of trial and error.

**Bicing Predictor** (Time Series)
Predicts Barcelona bike-sharing availability 15 min ahead. LightGBM with temporal features.

**LLM ML Tutor** (SmolLM2 + LoRA)
Fine-tuned SmolLM2-360M as an ML tutor with 40 curated Q&A pairs.

**Student Performance Predictor** (scikit-learn)
Predicts student grades from study habits, sleep, and attendance. Compares 6 regression models.

**KNN from Scratch** (NumPy)
K-Nearest Neighbours built from zero. Euclidean distance and majority voting, no libraries.

**Habit Tracker** (Python / SQLite)
CLI habit tracker with streak tracking, struggle detection, and full pytest suite.

## TECHNICAL SKILLS

**ML / DL:** PyTorch, scikit-learn, HuggingFace Transformers, PEFT/LoRA, LightGBM, OpenAI Gym

**Data:** NumPy, Pandas, Matplotlib, Seaborn

**Programming:** Python, C, SQL, Git, Bash

**Deployment:** FastAPI, Gradio, HuggingFace Spaces, GitHub Pages

## LANGUAGES

Catalan (Native) | Spanish (Native) | English (Professional)

Portfolio: ericristol.com | LinkedIn: linkedin.com/in/eric-ristol