ALEJANDRO PINTO

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EDUCATION

Rutgers University – New Brunswick, Piscataway, New Jersey — Sep 2023 - May 2026

- *BS in Computer Science, Double Major in Data Science, Minor in Mathematics*
- **Coursework:** Graduate Artificial Intelligence, Regression Methods, Data Science, Linear Optimization, Data Structures
- **Awards & Affiliations:** Dean's List x4, 3.95 GPA, Phi Beta Kappa Member, ColorStack Member

EXPERIENCE

Incoming Machine Learning Engineer Intern - Sephora — Jun 2026 - Aug 2026
San Francisco, California (Remote)

Software Development Engineer Intern - Amazon — Sep 2025 - Dec 2025
Arlington, Virginia

- Built and deployed a React + TypeScript dashboard in the AWS Outposts Console, integrating 3+ security-critical APIs and achieving 90%+ test coverage through comprehensive Jest and Cypress suites.
- Authored a technical design doc aligning 20+ designers, security engineers, and stakeholders, reducing development time by 15%

Decoded: Data at Bloomberg - Bloomberg — Aug 2025
Princeton, New Jersey

- Selected from 350+ applicants (top 10%) for Bloomberg's competitive data analytics program, building exploratory analytics for equity and fixed-income market datasets using real-time data pipelines and Bloomberg Terminal applications

Machine Learning Research Intern - Harvey Mudd College — Jun 2025 - Aug 2025
Claremont, California

- Built a MagnaTagATune-based contrasting concept pair dataset generator (3k+ pairs) using PyTorch for MusicGen, applying controlled audio transforms and extracting layerwise embeddings.
- Developed compute-efficient steering algorithms by training learnable PyTorch tensors using the contrasting pair dataset that beat DiffMean baselines by at least 50%; validated via CLAP score, Fréchet Audio Distance, perplexity scores, and PCA plots.

Machine Learning Research Assistant - Rutgers — May 2024 - Aug 2024
Piscataway, New Jersey

- Collaborated with Dr. Wang at WHIRLab to develop an LLM-based algorithm solving differential equations 20% more efficiently than symbolic regression with more interpretable, human-readable outputs than SOTA PINNs
- Presented research at the 77th APS Division of Fluid Dynamics Annual Meeting (200+ researchers) and Rutgers Aresty Summer Science Symposium (100+ attendees)

Imaging Lead & Developer - Rutgers University Autonomous — Sep 2023 - May 2025
Piscataway, New Jersey

- Lead 20 members developing a drone for the AUVSI SUAS competition, improving mission-readiness throughput by creating testing protocols and leading image-processing system integration.
- Built object detection (95% accuracy) and image stitching algorithms producing high-resolution, Google Maps–quality mosaics.

PROJECTS

Forge, *Desktop ML Training Platform (Tauri + TypeScript + Rust)* [GitHub] — Jan 2026 - Present

- Built a cross-platform desktop app using Tauri (Rust) + React/TypeScript with IPC between the renderer and native Rust backend, managing process lifecycle for local and remote training jobs via SSH/Slurm.
- Designed streaming log ingestion, long-running task orchestration with progress tracking, cancellation, and state synchronization across 13 training methods including LoRA, DPO, RLHF, and distillation.

Chexagon, *Hexagonal Chess Engine Written in Go* [Demo] — Feb 2026

- Built an undefeated chess engine for a 91-square hexagonal board achieving 500K–900K NPS, featuring alpha-beta search with PVS, transposition tables, null move pruning, LMR, and quiescence search, delivering a 200x speedup over naive search
- Developed a PyTorch NNUE training pipeline with HalfKP features, self-play data generation, and quantized int16 inference with incremental accumulator updates, targeting cross-platform play via native desktop (Ebiten) and WebAssembly

TECHNICAL SKILLS

Languages: Python, Go, Java, Rust, R, C, C++, MySQL, HTML/CSS, JavaScript/TypeScript, MATLAB
Frameworks/Tools: Pandas, TensorFlow, PyTorch, NumPy, Django, GitHub Actions, Hugging Face, React, Cypress, Tauri, Electron
Concepts: Machine Learning, Artificial Intelligence, Backend Development, CI/CD, NLP, Concurrency