ALEJANDRO PINTO

703.795.7769 | pinto.alex05@gmail.com | https://github.com/Summma | https://www.linkedin.com/in/alejandroipinto/

EDUCATION

Rutgers University – New Brunswick, Piscataway, New Jersey   Sept 2023 - Present
- *BS in Computer Science + Double Major in Data Science + Minor in Mathematics*
- *Relevant Coursework:* Graduate Artificial Intelligence, Regression Methods, Data Science, Linear Optimization, Data Structures
- *Awards:* Dean's List x3, 4.0 GPA

EXPERIENCE

Rutgers, *Research Assistant*, Piscataway, New Jersey   May 2024 – Present
- Collaborating with Dr. Wang at WHIRLab to research and develop an innovative algorithm leveraging large language models for efficient solving and approximation of complex differential equations
- Presented research at the Rutgers Aresty Summer Science Symposium, showcasing researched methods.
- Delivered a presentation at the 77th Annual Meeting of the APS Division of Fluid Dynamics, focusing on low-order modeling in fluid dynamics using our algorithm.

Rutgers University Autonomous Lead, *Imaging Lead + Developer*, Piscataway, New Jersey   Sept 2023 - Present
- Leading a team in developing a drone for the AUVSI Student Unmanned Aerial Systems competition, focusing on image processing code and ensuring the drone's readiness to represent Rutgers University.
- Developed object detection and bounding box algorithms for localizing objects and implemented image stitching techniques to generate high-resolution maps of drone-surveyed areas.

Rutgers, *Grader for the Department of Mathematics*, Piscataway, New Jersey   Sept 2024 – Dec 2024
- Evaluated over 200 coursework submissions weekly while maintaining high standards of accuracy; feedback provided contributed directly to students' understanding of complex mathematical concepts throughout the semester.

Rutgers, *Undergraduate Research, Piscataway, New Jersey*   Oct 2023 – May 2024
- Collaborated with a team of researchers to enhance the mathematical capabilities of large language models by applying chain-of-thought prompting techniques to improve reasoning and problem-solving accuracy.

PROJECTS

Custom Neural Network, *From Scratch with Customizable Layers* [GitHub]   Feb 2025
- Developed a fully customizable multi-layer perceptron using Python and NumPy which uses backpropagation to train networks with any number of layers and layer sizes, enabling flexibility for any machine learning task.

Chess Engine, *Self-Playing Chess Engine* [GitHub]   Aug 2022
- Developed a Python-based chess engine with an approximate 1100 ELO rating, utilizing the minimax algorithm, alpha-beta pruning, and quiescence search, along with additional techniques for efficient move tree exploration.

Learning To Drive, *Instructional Driving WebApp*   Nov 2021
- Designed and launched a comprehensive web app aimed at improving driver education through customized content delivery linked to student performance metrics while achieving top honors among competitors during HackPHS.
- Awarded Best Cloud Hack and $2,000 in DigitalOcean credits at HackPHS for innovative cloud-based solutions.

CERTIFICATES

Neural Networks and Deep Learning - Coursera   June 2021
- Learned how to efficiently implement deep neural networks using Python and NumPy.

Machine Learning - Coursera   Apr 2021
- An introductory course on machine learning, datamining, and statistical analysis using MATLAB

TECHNICAL SKILLS

- *Computer Languages: Python, Java, Rust, R, C, C++, HTML, SQL, JavaScript, MATLAB*
- *Tools: Keras, TensorFlow, PyTorch, NumPy*
- *Skills: Machine Learning, Artificial Intelligence, Database Implementation*