

SANTIAGO RODRIGUEZ

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EDUCATION

Adelphi University

Garden City, NY

B.S. Artificial Intelligence; Minor in Mathematics

- GPA: 4.0/4.0 | Dean's List (Fall 2025, Spring 2026)
- Coursework: Machine Learning, Linear Algebra, Multivariable Mathematics, Statistics, Ordinary Differential Equations, Artificial Intelligence

Valencia College

Orlando, FL

A.A. Computer Science; GPA 4.0/4.0

2025

- Honors: Phi Theta Kappa Honor Society; President's List (Fall 2024, Spring 2025)

RESEARCH EXPERIENCE

Evaluating LLMs for Automated Measurement

Apr–Sep 2026

Research Collaborator, Adelphi University

- Engineered Python evaluation workflows comparing six cloud and self-hosted LLMs with expert human ratings of the Experiencing Scale across 55 psychotherapy transcripts.
- Built fault-tolerant inference on Google Cloud Spot GPUs; completed 825 local-model calls with zero data loss after VM preemption through checkpoint and resume recovery.
- Configured private GPU access via IAP tunneling and Cloud NAT; built a Presidio/spaCy pipeline to identify and redact 18 HIPAA Safe Harbor identifier categories.
- Conducted statistical analysis of LLM–human agreement, identifying systematic scoring biases and differences in rating variance; co-authored research presented at the 24th World Congress of Psychotherapy (2026).

Computational Origins of Biological Energy

August 2026–Present

Undergraduate Researcher, Adelphi University, Advisor: Dr. Brian Stockman

- Investigating whether peptides built from 10 hypothesized pre-genetic-code amino acids could form stable structures capable of supporting primitive electron transfer.
- Exploring computational methods involving AlphaFold, Rosetta, MadraX, and Python-based sequence and structural analysis to evaluate peptide folding and molecular stability.

PROFESSIONAL EXPERIENCE

Adelphi Summer Institute (ASIME)

Summer 2026

Research Assistant

- Developed end-to-end ML workflows using Python, pandas, NumPy, Matplotlib, and scikit-learn on epidemiological datasets, from preprocessing to evaluation.
- Applied PCA, logistic regression, random forests, and KNN; assessed F1 scores and confusion matrices and addressed class imbalance using undersampling.
- Mentored high school students conducting original research using diabetes, Parkinson's, heart disease, and COVID-19 data.

Adelphi University — CASE

Aug 2026–Present

Computer Science & Mathematics Tutor

- Support students in computer science and mathematics, adapting explanations to individual learning needs.

Adelphi University — Learning Resource Program

Jan 2026–Present

Mathematics Tutor

- Tutor students with learning disabilities, translating unfamiliar or abstract mathematics into accessible explanations.

Adelphi University — Mathematics & Computer Science

Jan–May 2026

Teaching Assistant

- Supported mathematics and computer science courses, adapting instruction to faculty teaching approaches.

Adelphi University — FCPE

Apr–Aug 2026

Student Technologist

- Troubleshoot faculty technology issues and supported instructional workflows using Moodle, Turnitin, and Scribe.

LEADERSHIP & ACTIVITIES

Adelphi AI Society

January 2026–Present

Founder & President

- Founded Adelphi's first AI student organization, recruited its executive board, and grew the community to 35 members through strategic outreach and campus engagement.
- Led the planning and execution of 20+ events across three academic semesters, including hands-on AI workshops, hackathons, and interdisciplinary discussions; established partnerships with student organizations across campus.
- Spearheaded initiatives making AI accessible to students across disciplines, from hands-on app development to a campus-wide AI debate that drew a capacity crowd of students, faculty, and administrators.

United Nations Panel on the Future of AI

2026

Adelphi University Representative

- Represented Adelphi University at a UN-hosted panel exploring the future of artificial intelligence and global perspectives on its development.

SELECTED PROJECT

GradientScape — 3D Gradient Descent Visualizer

- Built an interactive 3D environment to explore gradient descent across configurable loss surfaces, learning rates, and SGD, Adam, and RMSProp optimizers.

TECHNICAL SKILLS

Programming: Python, Java, C, C++, R, TypeScript, JavaScript

Machine Learning & Data Science: PyTorch, scikit-learn, pandas, NumPy, Matplotlib, PCA, classification, clustering, model evaluation, statistical analysis

AI & Scientific Computing: AlphaFold, ProteinMPNN, Rosetta, MadraX, Ollama

Web Development: React, Next.js, Three.js, WebGL, Tailwind CSS

Cloud & Infrastructure: Google Cloud, cloud GPU workloads, fault-tolerant pipelines

Languages: English (Native), Spanish (Native)