Fraylin Ayala

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EDUCATION

New Jersey Institute of Technology, Newark, NJ   December 2026
B.S. | Computer Science | Business and Information Systems, Minor | 3.8/4.0 GPA
Relevant Coursework: Data Structures and Algorithms, Intensive Programming in Linux, Database System Design & Mgmt, Design in Software Engineering, Req. Analysis & Systems Design, Computer Networks, Oral Presentation

SKILLS

Programming Languages: Python, Java, C/C++, HTML, CSS, JavaScript, TypeScript, SQL, Bash
Libraries/Frameworks: React, Node.js, Express.js, Axios, Selenium, Scikit-Learn
Tools: Visual Studio Code, Jupyter Notebook, MongoDB, MySQL, Git, GitHub, AWS, Linux

PROJECTS

Workout Routine App | *MongoDB, Express.js, React, Node.js*   Oct 2024 – Apr 2025
- Reduced workout routine creation time by 42% by developing and deploying a full-stack web application to an AWS EC2 instance using the MERN stack.
- Retrieved static exercise data (878 records) from a cloud-hosted MongoDB database using Axios and Express.js REST APIs for efficient and reliable data retrieval.
- Improved security by over 60% through secure JWT-based authentication with HTTP-only cookies and robust user data management using Amazon RDS (MySQL).

Gym Member Gender Prediction | *Python, Pandas, Seaborn, Scikit-learn*   Dec 2024
- Predicted gym member gender with over 80% accuracy by building and training Logistic Regression and Random Forest models on a 900+ entry Kaggle dataset using BMI, fat percentage, and workout type as features.
- Improved model performance through hyperparameter tuning and cross-validation with GridSearchCV, reaching 0.72 accuracy for Logistic Regression and 0.85 for Random Forest despite limited and noisy data.

EXPERIENCE

New Jersey Institute of Technology, Newark, NJ   Jan 2025 – May 2025
Physics Tutor
- Provided one-on-one and group tutoring sessions, customizing teaching methods to enhance student engagement and comprehension.
- Assisted students in understanding complex physics concepts in mechanics and electromagnetism.
- Prepared students for exams by reviewing key concepts and providing effective study strategies.

BASTA, New York, NY (Remote)   Mar 2025 – May 2025
Basta Software Engineering Program, Participant
- Engaged in 10 weeks of mentoring sessions with a Google software engineer to improve understanding and application of data structures and algorithms to prepare for technical interviews.
- Collaborated with the software engineer to solve over 20 coding challenges to strengthen programming and technical interview skills.

Hispanic American Foundation, Newark, NJ   Sep 2022 – Dec 2023
Project Coordinator
- Streamlined project logistics by coordinating schedules and facilitating communication between managers, sponsors, and stakeholders.
- Fed over 50 low-income families in Essex County by planning and coordinating an annual Thanksgiving food drive.
- Provided health services to over 100 Newark residents by spearheading an annual Health Fair.

LEADERSHIP

Webmaster, SHPE (April 2025 – Sep 2025): Elected SHPE Webmaster for the 2025 – 2026 academic year, analyzing member engagement data, managing website infrastructure, and IT resources to support a 70+ member chapter.

Fellow, America Needs You (July 2023 – May 2025): Selected as one of 100 first-generation college students in New Jersey to serve in a 2-year career development and leadership training program.