John P. Acosta

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EDUCATION

NEW JERSEY INSTITUTE OF TECHNOLOGY   *Newark, NJ*
Bachelor of Science in Computer Science, Ying Wu College of Computing   **Expected May 2027**

- **GPA**: 3.76   **Awards**: NSF S-STEM Scholar, Dean's List (All Semesters), Kupfrian Memorial Scholarship

- **Relevant Coursework**: Data Structures & Algorithms, Object-Oriented Programming, Intensive Programming in Linux (C), Programming Language Concepts (C++), Computer Networks, Artificial Intelligence, Data Science, Database Design & Management, Linear Algebra, Probability & Statistics

SKILLS

Languages: Java, Python, C++, JavaScript   **Frameworks**: React/Next.js, Flask, Tailwind CSS   **Data/ML**: NumPy, pandas, scikit-learn, PyTorch
Tools: Git/GitHub, Linux, Azure   **Databases**: MySQL, Firebase

PROFESSIONAL EXPERIENCE

<u>Incoming Software Engineer Intern</u>   **Summer 2026**
PGIM Global Asset Management

<u>Deep Learning Research Intern</u>   **Aug 2025 - Present**
Grace Hopper AI Research Scholar @ NJIT
- Built modular Python preprocessing routines (NumPy, pandas) for cleaning, trimming, and interpolating **10+ multi-country epidemic datasets (~900 weekly observations each)**, creating consistent train/test splits and enabling reliable **rolling-origin forecasting** across 5 disease types
- Collaborated on parallelizing forecasting workflows with **multi-threaded Python execution**, reducing runtime by **~80%** and enabling rapid model experimentation across multiple diseases, model types, and hyperparameter configurations
- Implemented project-wide logging utilities that automatically saved **predictions, metrics, and visualizations** into unified master CSVs, improving **experiment traceability**, mid-run recovery, and reproducible reporting for the research team
- Designed custom visualization and diagnostic scripts (matplotlib) to inspect **seasonal patterns**, **detect data gaps**, and validate the integrity of **2,000+** standardized **time series**, ensuring input quality before modeling

<u>Applied Artificial Intelligence Intern</u>   **Sept 2025 - Present**
Chambers Capital Ventures
- **Led technical development** in a 12-person cross-functional team to deliver a lightweight NLP solution that met a client's requirements for **persona clustering, sentiment insights, and firmographic analysis**
- Built Python preprocessing scripts to clean and standardize **survey transcripts**, ensuring reliable inputs for clustering and sentiment workflows
- Implemented clustering and sentiment pipelines and translated the results into an interactive **Streamlit dashboard** that visualized persona groups, sentiment patterns, and firmographic trends in a clear, client-ready format

<u>Software Engineer Fellow (Selected 2x)</u>   **Jul 2025- Sept 2025**
Google Software Engineering Program (G-SWEP) via Basta
- Solved programming challenges in **Java** and **Python**, choosing the language that best fit the problem and balancing runtime efficiency with readability
- Translated plain-language problems into class-level system designs, applying **object-oriented** principles to build clear and maintainable solutions
- Learned from 1-1 mentorship with Google engineers, improving how I communicate technical decisions and approach software engineering problems

<u>Technology Analyst Extern</u>   **May 2025**
PGIM Global Asset Management
- Analyzed fixed-income analytics and BSA case studies using **Tableau** and **Python** (pandas), preparing **data-driven proposals** with a cross-functional team
- Applied version control and **CI/CD practices** in a live GitHub workflow lab and DevOps shadow, gaining exposure to software workflows in portfolio management systems

TECHNICAL PROJECTS

SADAL Parser | Lead Developer | C++
- Built a parser for a custom Ada-inspired language with **lexical analysis, recursive-descent parsing, and semantic checks**
- Defined the language grammar and implemented symbol resolution, type checking, and **error handling across custom test cases**

Fork It! | Full-Stack Developer | Next.js, JavaScript, Flask, Python, Firebase
- Engineered an MVP to solve group decision fatigue by recommending restaurants based on user locations and shared preferences
- Programmed full-stack using **Next.js, Flask, and Firebase**, integrating real-time user sessions, authentication, and dynamic room codes
- Collaborated with an ML engineer to connect Flask APIs to custom-trained models using local restaurant data from Ewing Township

EXTRACURRICULAR ACTIVITIES

Break Through Tech Fellow   **Jun 2025 - Present**
- Completed Python Bootcamp and ML Foundations Certification at Cornell Tech

Society of Hispanic Professional Engineers NJIT Member   **Jan 2024 - Present**
- Engaged in career readiness and technical upskilling programs hosted by SHPE