Pedro dos Santos

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EDUCATION

Lafayette College, Easton, PA — *May 2026*
Bachelor of Sciences: Computer Science Major, Music Minor — **GPA: 3.97/4.00**

Relevant Coursework: Artificial Intelligence, Machine Learning, Programming Languages, Theory of Computation, Operating Systems, Cybersecurity, Databases, Analysis of Algorithms, Software Engineering, Statistics, Linear Algebra, Algorithms and Data Structures, Discrete Structures

TECHNICAL SKILLS

TypeScript, Java, Python, C, Bash, AWS, HTML, CSS, React, WebRTC, tRPC, Prisma, SQL, NoSQL, Git, Linux

WORK EXPERIENCE

Software Consulting Services, LLC, Bethlehem, PA
Software Engineering Intern — *May-August 2025*

- Initiated the development of a new full-stack application for creating 3D and VR rooms to allow users to engage with each other and newspaper content.
- Implemented real-time voice and video communications in the browser using a Janus WebRTC voice server.
- Designed and implemented a frontend for users to signup/sign-in with security features such as password hashing, email verification, and session management.
- Added a role-based access control system and admin view for organizations to easily monitor VR rooms.

Software Engineering Intern — *May-August 2024*

- Provided backend and server monitoring software for Skeyenet, a proprietary CRM targeted at newspaper companies.
- Reduced webpage load times from 13 seconds to 3 seconds through a combination of rewriting the server code and optimizing the 3D models.
- Created a bar chart and dashboard in HTML/CSS to visualize multiple text or numerical data points simultaneously for clients to monitor in real time.
- Streamlined the search functionality in a legacy application by expanding the range of the search fields, improving the displayed data, and minimizing the amount of unnecessary data reentry.

HIGHLIGHTED PROJECTS

Artificial Intelligence, Jupyter, PyTorch — *Fall 2026*
Song Lyric Classifier

- Trained a logistic regression learning model capable of classifying songs into decades based on their lyrics.
- Optimized accuracy by strategically tuning the model's hyperparameters, creating feature label sets, and experimenting with various architectures.

Operating Systems, C — *Spring 2025*
Multithreaded SQL Web Server

- Created a custom implementation of SQL capable of creating, updating, and searching through data files.
- Utilized thread pooling to efficiently support concurrent access from multiple users to a centralized web server.
- Developed a both a command line and web client to connect to and query the web server.

Database Management Systems, Python, React — *Fall 2024*
Statistics Visualization Application

- Designed a database structure to model Pennsylvania school statistics allowing a user to cross compare a range of data including demographics, funding, test scores, etc.
- Created python scripts to automatically generate the database by organizing, cleaning, and normalizing the publicly available data found on Pennsylvania's Department of Education websites.
- Developed a server-client web framework to reactively visualize and compare data.

LEADERSHIP & PROFESSIONAL DEVELOPMENT EXPERIENCE

Pep Band Vice President *May 2025-Present*
Pep Band Instrument Manager *May 2023-2025*
Music Floor Vice President *January 2024-Present*
Thrive Scholars *April 2021-Present*