

MANUEL BACALLAO

786-229-7327 | US Permanent Resident | bacallao2024@gmail.com | Miami, Florida 33165

EDUCATION

Bachelor of Science

Computer Science, Central University "**Marta Abreu**" of Las Villas, **Santa Clara Villa Clara Cuba**

December 2023

- Top Ranked: 10%
- 3.83/4.00 GPA
- Awarded 11th Place of the Caribbean ICPC in the year 2023

EXPERIENCE

Software Developer, Appluex — *January 2025 – October 2025*

Miami, FL

- Built and optimized full-stack applications (React, Node.js, REST/GraphQL) with secure, scalable back-end architectures (microservices, Docker, AWS), improving reliability and performance across multiple industries.
- Streamlined delivery with CI/CD automation (GitHub Actions, AWS) and integrated third-party APIs (payments, geolocation, authentication), reducing release times by 40% and boosting client satisfaction.

Software Developer, Georgia Tech's Lab of Interactive Computing — *April 2024 – October 2024*

Atlanta, GA

- Utilized Python and its NetworkX graph structure library to develop efficient algorithms to optimize resource flow in a simulation in which a natural disaster strikes a city.
- Developed the graphical user interface on PyGame to allow the users to visualize the results

PROJECTS

FitHub – AI-Powered Fitness Analyst and E-Commerce Platform

- Developed a **production-grade AI-driven fitness analytics platform** with a fully integrated **e-commerce store**, delivering **personalized training insights** and enabling seamless product discovery and purchase.
- Built a modern, responsive UI using **Next.js**, **Tailwind CSS**, and **ShadCN**, enhancing user engagement and cross-device performance.

- Designed and implemented a **scalable backend** using **Python (FastAPI)**, **PostgreSQL**, and **SQLAlchemy**, ensuring **secure data management**, RESTful API design, and smooth user authentication.
- Created an **AI-powered Fitness & Nutrition Analyst assistant** that delivers **customized workout and meal plans** based on user input and goals, leveraging data-driven logic and user profiling.
- Integrated a **dropshipping e-commerce model** for fitness products, allowing in-platform purchases with minimal overhead and real-time order tracking.

SKILLS

Programming Languages: Python, TypeScript, C++, C#, HTML, CSS

AI/ML Development: PyTorch, Hugging Face Transformers, LangChain, LoRA/QLoRA.

Data & Vector Databases: Pinecone, PostgreSQL, SQL Server, Prisma ORM, SQLAlchemy, MongoDB. **DevOps:** AWS, Docker, Git, GitHub Actions, CI/CD Pipelines.

Web & API Development: Next.js, FastAPI, React, RESTful APIs, ShadCN UI, Tailwind CSS

AI Tools & Platforms: OpenAI API, Cursor IDE, Vector Search APIs, AI Model Integration, Prompt Engineering.

WEBSITES, PORTFOLIOS, PROFILES

- <https://github.com/bacallao>
- <https://linkedin.com/in/manuel-bacallaop>
- <https://portfolio-psi-one-84.vercel.app/>