SEBASTIAN HORTA

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EDUCATION

Columbia University (SEAS), NY — *Computer Science B.S., Minor: Electrical Engineering* Aug 2023 - May 2026
- *Relevant coursework*: Artificial Intelligence, Systems Programming, User Interface Design, Linear Algebra, Fundamentals of Computer Systems, Computer Science Theory, Intro-Electrical Engineering, Data Structures, Discrete Math, Probability for Engineers
- *Resident Adviser (Engagement Coordinator)* (2024-Present): Organize community-building events

Farmingdale State College (FSC), NY — *Computer Science B.S. (Transferred)* Aug 2022 - May 2023
- CGPA: 4.0 (President's List), Collegiate Science and Technology Entry Program (CSTEP)

SKILLS/LANGUAGES/TECHNOLOGIES

- **Programming Languages**: Java, Python, C, JavaScript, HTML/CSS
- **Frameworks & Tools:** React, Flask, Bootstrap, Git, SQL, TensorFlow, scikit-learn
- **Systems & Platforms:** GCP, Unix/Linux, APIs, Web Servers
- **Spoken Languages**: English (Fluent), Spanish (Fluent), French (Basic)

PROJECTS & EXPERIENCE

- **Mastering the Exposure Triangle (2025):** Built an interactive educational Flask web app with JavaScript and Bootstrap to teach ISO, shutter speed, and aperture through real-time sliders and visual feedback.

- **Personalized Gait Analysis Using Machine Learning (2024-25):** Built ML pipeline analyzing VR sensor data to detect gait events with **~85%** accuracy via advanced preprocessing, feature engineering, and Random Forest models.

- **Web Server Development (2024):** Built a multithreaded HTTP/1.0 web server in C, handling concurrent GET requests and ensuring robust compliance with web protocols and file security.

- **DevFest Hackathon Sustainability Project (2024):** Developed a full-stack Python app with API integration to monitor food expiration dates, reducing food waste by **10%** through user notifications.

EXTRACURRICULAR COURSES

- **DataCamp Python Courses (2024):** Honed skills in Object-Oriented Programming & Data Science tools.
- **BME: AI Algorithm for Individual Cell Segmentation (2023):** Applied classical digital image processing and machine learning techniques to develop an algorithm for individual cell segmentation.

ACTIVITIES & ORGANIZATIONS

- **Society of Hispanic Professional Engineers (SHPE) at Columbia University - Committee Board Member (2023-Present):** Organized professional and cultural events, including elevator pitch workshops, boosting inclusivity and SHPE visibility.
- **Collegiate Science and Technology Entry Program (CSTEP) at FSC - Member (2022-23):** Collaborated on a senior-led engineering project as a freshman, demonstrating early initiative and teamwork.
- **Orthodox Presbyterian Church - Member/Volunteer (2018-23):** Participated in local service initiatives such as Operation Christmas Child and community clean-ups.
- **Other Involvement (2023-Present):** Columbia IEEE, ColorStack, CU Application Development Initiative, Columbia University Brazilian Jiu-Jitsu Club, Sabor Dance Club

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AWARDS

- Anders Scholarship (2024) • Columbia University Nathaniel Arbiter Scholarship (2024) • FSC President's List (2022-23) • NYS Scholarship for Academic Excellence (2022)