

# 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)
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## SKILLS/LANGUAGES/TECHNOLOGIES

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