

# FLAVIA TROTOLO

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## EDUCATION

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**New York University Abu Dhabi, UAE**  
Bachelor's of Science in Computer Engineering  
Minor in Arabic Language

*May 2024*  
GPA: 3.76/4  
*full scholarship*

**Li Po Chun United World College, Hong Kong, China**  
International Baccalaureate Diploma

*May 2020*  
*full scholarship*

## WORK EXPERIENCE

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**Center for Space Science, New York University, Abu Dhabi**  
*Research Assistant*

*June 2023 - Present*

- Optimized web-scraping efficiency by 40% by implementing parallelization on high-performance computing clusters to retrieve over 68,000 Albedo images from the Thermal Emission Imaging System (THEMIS).
- Pioneered the development of two algorithms for generating comprehensive 60x30-degree Albedo Maps of Mars' surface territory. This involved a custom-built scaling algorithm, images' shifting, and pixel averaging.
- Authored configuration files for the NASA Planetary Spectrum Generator, enabling the simulation of emission and radiance plots for Mars' atmosphere at varying methane concentrations.

**Rethora.ai, Dubai**  
*Software Developer*

*February 2023 - March 2023*

- Developed a responsive website in React and CSS3, mirroring assigned Figma design.
- Crafted reusable components with props, leading to a reduction in development time
- Implemented React States to manage user input and output, resulting in a 30% increase in user engagement.

**Milipol International Est, Abu Dhabi**  
*Front-End Developer*

*October 2023- February 2023*

- Architected a Back-End solution using Flask and SQLAlchemy encompassing web-scraping, user recommendations, and survey algorithms. Developed secure Stripe API check-out with password hashing, reCAPTCHA, and OTP.
- Extracted financial data for dynamic interactive graphs using Chart.js, Matplotlib, and Pandas.
- Created dynamic user interface using Bootstrap, branding the product as a solo Front-End developer.

## PROJECTS

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**Duolingo Clone**

<https://duolingo-clone-silk.vercel.app>

Developed a Duolingo clone application leveraging Next.js and React for frontend development, coupled with Drizzle ORM powered by PostgreSQL for backend database management. Integrated Clerk for robust authentication and user management.

**Flappy Bird**

<https://ft2063.github.io/FlappyBirdGame>

Flappy Bird game utilizing HTML, CSS, and JavaScript, with a focus on implementing Event Listeners for user interactions. HTML structured the games layout, CSS styled its visual components, while JavaScript managed game logic.

**TV interview in Arabic for Emirattv**

<https://x.com/emarattv/status/1604562415978287105>

Participated in a public TV interview in Arabic for Emirattv for the UN Arabic Language Day 2022.

## SKILLS

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**Technical Skills:** C++, Python, HTML, CSS, JavaScript, Flask, React, MySQL, Blender, Unity, Verilog, X86

**Languages:** Italian (Native Fluency), English (Bilingual Fluency), Arabic (Business Fluency), Spanish (Advanced)