

FLAVIA TROTOLO

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EDUCATION

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

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

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

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)