

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 an algorithm 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

MIPS Central Processing Unit

Implemented functioning MIPS Central Processing Unit using Verilog (PC, IM, RF, ALU, DM) valid for R-type; I-type; J-type instructions in Verilog including hardware detection unit and forwarding.

Customizable C++ Calendar

Created a customizable calendar program utilizing C++ and Object-Oriented Programming principles. Designed classes (Event, Day, Week, Month, Year) for calendar components, allowing users to manage and display events. Implemented features such as sorting, dynamic scheduling, and table-format calendar generation.

TV interview in Arabic for Emirattv

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, MIPS, X86, Matlab

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