Tarik Castro de Oliveira

tarik.castro.o@gmail.com | (813) 606-1101 | [LinkedIn](#)

EDUCATION

University of South Florida   **Tampa, Florida**
B.S. in Computer Science   *Expected Graduation, May 2028*
- o **GPA:** 4.00 / 4.00

EXPERIENCE

Viable Energy Blockchain Research   **Curitiba, Paraná, Brazil**
Blockchain Researcher & Developer   *May 2023 – Nov 2023*
- Researched and investigated the role of **Blockchain and P2P networks** in **energy microgrids**, authoring a **20+ page academic paper** that explores decentralized energy transfer, renewable energy integration, and smart contract applications.
- Engineered and programmed a **functional blockchain prototype** using **TypeScript**, simulating peer-to-peer energy transactions, reducing reliance on centralized suppliers and which resulted in a potential **improvement of 10-15%** in energy distribution efficiency.
- Validated and assessed the **scalability and interoperability** of Blockchain-P2P energy transfers, demonstrating how microgrid participants can **optimize resource allocation and transaction security** across multiple devices.

PROJECTS

Free Food Newsletter   **Tampa, Florida**
Program Developer   *Sept 2024*
- Developed a **Python script** to automatically extract event data from the University of South Florida website and leveraged **AI** to identify events offering free food, streamlining information gathering and improving event accessibility for students.
- Scraped data from **40+ events**, designing and implementing a subscription-based newsletter system that integrates **Selenium for web automation, AI-powered text analysis (OpenAI & Perplexity APIs), and .env-based API key** management, enhancing usability, scalability, and event discovery efficiency.

Geography Trivia Web Application   **Curitiba, Paraná, Brazil**
Front-End & Back-End Developer   *May 2023 – Aug 2023*
- Designed and developed a geography trivia web application to engage **150+ children and students**, significantly helping them **improve geographical knowledge, retention, and critical thinking skills** through an interactive, game-based approach.
- Engineered and implemented the application using **Django (Python)** for the backend and **HTML/CSS** for the front end, leveraging **Django's ORM** for seamless **database integration** and **data management**.
- Authored and documented a **30+ page technical report**, providing an in-depth analysis of the application's purpose, user needs, and code structure, serving as a **foundational blueprint for future development, scalability.**

Engineering Club Project   **Curitiba, Paraná, Brazil**
Rocketry & Mechanical Engineering Analyst   *Jun 2022 – Sept 2022*
- Designed, constructed, and launched a **10-inch model rocket** powered by solid rocket engines, achieving a successful **altitude of 88 feet** and demonstrating proficiency in propulsion systems, aerodynamics, and structural integrity.
- Engineered and assembled a **fully functional car engine** from individual components, applying mechanical diagnostics, thermodynamics, and precision assembly techniques, resulting in a fully operational system that met **performance benchmarks**.

ACTIVITIES AND LEADERSHIP

University of South Florida   **Tampa, Florida**
*Brazilian Student Association **(Professional Development Analyst)**;*   *Jul 2025 - current*
*Association for Computer Machinery **(former Project Member)**;*   *Jan 2025 – May 2025*

SKILLS & CERTIFICATIONS

Programming & Tools: Python, JavaScript, HTML, CSS, Typescript, Django, SQL, React JS.
Languages: Fluent in English and Portuguese; Intermediate in Spanish.