Andrea Arturo Venti Fuentes

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EDUCATION:

Bachelor of Science in Computer Science, Minor in Mathematics   Spring 2023 – Fall 2025
University of Miami (UM), Coral Gables, FL   GPA: 3.69 / 4.0

RELEVANT COURSEWORK:

Data Structures & Algorithm Analysis | System Programming (C, Bash) | Computer Organization & Architecture | Computer Programming I & II (Java, Data Structures & Algorithms) | Discrete Mathematics | Probability and Statistics | Linear Algebra | Calculus I & II | Python Programming | Harvard CS50: Introduction to Computer Science (C, Python)

PROFESSIONAL EXPERIENCE:

Explore Program Manager, INIT University of Miami Chapter   April 2024 – Present
UM, Coral Gables, FL
- Developing workshops to enhance students' technical skills and career readiness in software development.
- Curating resources and opportunities to foster an inclusive and diverse tech community.

Career Development and Outreach Chair, Google Developer Student Clubs   May 2023 – May 2024
UM, Coral Gables, FL
- Organized career development events, including guest speakers and networking, to support student growth.
- Fostered career growth and inclusivity through strategic partnerships and outreach efforts.

PROJECTS:

FlaskKeyring // *Python, Flask, JavaScript, PostgreSQL, REST API, Bootstrap, HTML/CSS, Jinja, Heroku*
- Designed and deployed a zero-knowledge password manager, implementing client-side AES-GCM encryption with JavaScript for enhanced security and end-to-end data privacy.
- Built secure REST APIs with Python's Flask for encrypted data management and PostgreSQL for data storage.
- Developed authentication workflows with Flask-Login, Flask-Mail, and a self-hosted mail server for password recovery and multi-factor email verification, with deployment on Heroku for scalable, production-ready hosting.
- Optimized a responsive UI with Bootstrap, dynamic templating with Jinja, and interactive JavaScript components.

IndexNet-Engine // *Java, Algorithms, Data Structures, PageRank, Web Crawling*
- Built a Java-based search engine simulation with web crawling and page ranking algorithms.
- Utilized B-Trees for efficient data indexing and external sorting techniques for large datasets.
- Applied the PageRank algorithm to rank pages by relevance, showcasing advanced algorithmic concepts.

Portfolio Website // *Next.js, React, TypeScript, Tailwind CSS, Vercel*
- Built a fast, responsive portfolio website with reusable React components using Next.js, TypeScript, and Tailwind CSS to showcase projects and skills. Deployed on Vercel and managed packages with pnpm.

The .dotfiles Project // *Git, Bash, Zsh, macOS, Linux, Shell Scripting*
- Developed a cross-platform, architecture-aware solution to automate development setups across macOS, Arch and Debian Linux, and WSL using universal shell scripts, significantly enhancing productivity.

SKILLS:

Programming Languages: Python, Java, Go, C, JavaScript, TypeScript, Bash, Swift, Lua, OOP, SQL
Web Technologies: React, Next.js, Node.js, Flask, Bootstrap, Tailwind CSS, HTML/CSS, jQuery, AJAX, Jinja
Frameworks & Libraries: SQLAlchemy, Matplotlib, NumPy, Pandas, Streamlit | **APIs:** REST API, Twilio, IEX
Databases: PostgreSQL, SQLite | **Tools & Platforms:** Git, Docker, Vercel, Heroku, Netlify, Jupyter, Raspberry Pi
Operating Systems: Linux (Arch, Debian), macOS, Windows | **Languages**: Fluent in Spanish and English

HONORS & AWARDS:

University of Miami: Provost Honor Roll (Spring 2023) & Dean's List (Spring 2023, Fall 2023), UHack Hackathon 2nd Place (Spring 2023) – PlanetPath