

# 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: 3.77 / 4.0

## PROFESSIONAL EXPERIENCE:

**Explore Program Manager, INIT University of Miami Chapter**

April 2024 – Present

*UM, Coral Gables, FL*

- Tailored technical workshops to enhance the career readiness of University of Miami students.
- Promoted inclusivity by offering resources to enhance skills and diversify tech.

**Career Development and Outreach Chair, Google Developer Student Clubs**

May 2023 – May 2024

*UM, Coral Gables, FL*

- Led technical workshops and events, improving practical tech skills.
- Fostered career growth and inclusivity through partnerships and outreach.

## PROJECTS:

**IndexNet-Engine** // Java, OOP

- Manages web page collection and initial data processing for indexing.
- Executes search queries using indexed data to fetch relevant results efficiently.
- Applies ranking algorithms to order pages by relevance, utilizing sorting heuristics.
- Implements custom data structures (BTree, ArrayMap, FileMap) for efficient data handling.

**FlaskKeyring** // Python, Flask, JavaScript, PostgreSQL, SQLite, SQLAlchemy, HTML/CSS, Bootstrap, jQuery, Heroku

- Developed a full-stack password manager, showcasing expertise in both frontend and backend development.
- Integrated Flask with a PostgreSQL database for secure data handling, alongside Fernet encryption for robust data protection.
- Implemented advanced features including user authentication, password reset, and email verification utilizing Flask-Mail, enhanced with dynamic templating through Jinja2. Integrated 11 PyPI packages.

**AlienInvaders** // Java, Swing, OOP

- Engineered from scratch, utilizing object-oriented Java to simulate classic Space Invaders gameplay.
- Implemented precise hit detection, sprite rendering, and adaptive difficulty scaling based on player performance.
- Optimized game fluidity and responsiveness through meticulous delay adjustments and movement scaling.

**Weather Alert Program** // Python, Twilio API, OpenWeather API

- Developed a Python-based application for real-time weather alerts, integrating OpenWeather API for live updates.
- Utilized Twilio API to send SMS alerts, demonstrating real-time communication and API integration skills.
- Engineered a user-friendly interface for weather tracking, emphasizing practicality and efficient data handling.

**macOS Environment Automation** // Bash, Unix, Git

- Engineered `mac\_bootstrap.zsh`, a Bash script for automating macOS development environment setup.
- Scripted installation and configuration of essential development tools and system settings.
- Utilized Git and GitHub for efficient management and automation of dotfiles and configuration files.

## SKILLS:

**Programming Languages:** Java, Python, C/C++, JavaScript, HTML/CSS, Bash, Lua | **Tools:** Git, Docker, Jupyter,

SQLAlchemy | **Frameworks:** Flask, Bootstrap, Streamlit, Jinja2, jQuery | **Deployment:** Heroku, Netlify |

**Databases:** PostgreSQL, SQLite | **API:** Twilio, OpenWeather, IEX Cloud | **Systems:** Linux (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](#)