

Andrea Arturo Venti Fuentes

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EDUCATION:

Bachelor of Science in Computer Science, Minor in Mathematics

University of Miami (UM), Coral Gables, FL

Expected Graduation: Fall 2025

GPA: 3.69 / 4.0

RELEVANT COURSEWORK:

Operating Systems | Computer Networks | Database Systems | Systems Programming | Data Structures & Algorithms
Computer Organization & Architecture | Discrete Mathematics | Probability & Statistics | Linear Algebra | Calculus I & II
Computer Programming I & II | Python Programming | Harvard CS50

PROFESSIONAL EXPERIENCE:

Software Engineering Intern

May 2024 – August 2024

BAI Capital, Aventura, FL

- Deployed Flask microservices to AWS EC2 with PostgreSQL, enforcing IAM role-based access
- Containerized services with Docker and automated CI/CD via GitHub Actions to ECS Fargate
- Created internal Streamlit dashboards and integrated AWS CloudWatch alerts via SNS

Career Development and Outreach Chair, Google Developer Student Clubs

May 2023 – May 2024

UM, Coral Gables, FL

- Led SRE/DevOps workshops on Linux CLI, Docker, and Infrastructure as Code for 100+ students
- Coordinated speaker panels and mentorship sessions focused on observability and reliability engineering

PROJECTS:

Homelab Infrastructure: High Availability, Observability, & Automation

- Architected a Proxmox VE high-availability two-node cluster using LXC containers and ZFS replication, achieving <5 min RPO and automatic failover via QDevice quorum (Raspberry Pi 5)
- Monitored 60+ endpoints across 12 servers with Uptime Kuma and Prometheus; reduced MTTR by 90% through automated incident alerts and centralized dashboards (GetHomepage, Grafana)
- Automated full-system backups with cron/Bash scripts; configured ZFS snapshot backups of LXC containers via NFS with retention policies and email alerts; implemented rapid image restores via `curl | bash` for Raspberry Pi
- Deployed WireGuard VPN for secure remote access; segmented internal networks with UniFi VLANs; managed DNS/TLS with acme.sh and the Cloudflare API for reverse-proxied services

FlaskKeyring (Full-Stack Password Manager)

- Built a zero-knowledge password manager with client-side AES-GCM encryption and multi-factor authentication.
- Deployed to Heroku using GitHub Actions CI/CD with automated database migrations.
- Monitored uptime via Uptime Kuma and implemented secure REST APIs in Flask with PostgreSQL.

TECHNICAL SKILLS:

Languages: Python, Go, Java, C, SQL, Bash, JavaScript/TypeScript

Cloud & Infrastructure: AWS (EC2, RDS, IAM), Proxmox VE (HA, LXC, ZFS), NAS (NFS, SHR), UniFi

Containers & Orchestration: Docker, Docker Compose, ECS Fargate, Portainer, NGINX Proxy Manager

Automation & IaC: Bash scripting, cron, GitHub Actions, Terraform, Ansible

Monitoring & Observability: Uptime Kuma, Prometheus, Grafana, CloudWatch, Streamlit

Networking & Security: VLANs, WireGuard VPN, TLS, acme.sh, Cloudflare DNS/API

Databases & Tools: PostgreSQL, MariaDB, NoSQL basics, Git, Flask, React, Node.js, Next.js, Tailwind CSS, Bootstrap

HONORS & AWARDS:

- University of Miami Provost Honor Roll (Spring 2023); Dean's List (Spring 2023, Fall 2023)
- UHack Hackathon 2nd Place ([PlanetPath](#)) (Spring 2023)