

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 HA cluster with LXC containers and ZFS replication, achieving <5 min RPO and automatic failover
- Monitored 60+ endpoints across 12 servers with Uptime Kuma; reduced MTTR by 90% through automated incident alerting via email. Designed centralized dashboard displaying system metrics for 30+ services
- 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 RPi
- Deployed WireGuard VPN server for secure remote access, segmented LAN with VLANs, managed TLS/DNS via Cloudflare API, `acme.sh`, and Bash-based DDNS updates

[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

Infrastructure: Proxmox VE (HA, LXC, ZFS), NAS (NFS, SHR), AWS (EC2, RDS, IAM), ECS Fargate

Containers & Orchestration: Docker, Docker Compose, Portainer, Nginx Proxy Manager

Monitoring & Observability: Uptime Kuma (metrics/logs), CloudWatch, Grafana/Prometheus (self-study), Streamlit

Networking & Security: VLANs (UniFi), WireGuard VPN, TLS, Cloudflare DNS/API

Automation & CI/CD: Bash scripting, CRON, GitHub Actions, Terraform/Ansible (learning)

Databases & Tools: PostgreSQL, MariaDB, NoSQL basics, Git, Flask, React, Node.js

HONORS & AWARDS:

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