

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 | Software Engineering

PROFESSIONAL EXPERIENCE:

Software Engineering Intern

May 2024 – August 2024

BAI Capital, Aventura, FL

- Deployed Flask microservices on AWS EC2 with PostgreSQL; enforced IAM roles and health checks.
- Dockerized services and built GitHub Actions CI/CD to ECR/ECS Fargate with rollbacks.
- Built Streamlit dashboards; integrated CloudWatch metrics and SNS alerts; wrote brief runbooks.

Career Development and Outreach Chair, Google Developer Student Clubs

May 2023 – May 2024

UM, Coral Gables, FL

- Led Infrastructure/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

- Designed a 2-node Proxmox HA cluster (ZFS + qdevice) with defined SLOs (RTO \leq 3m, RPO \sim 15m), cross-node replication/failover, and a templated Kubernetes lab (1 control + 3 workers).
- GitOps via Portainer (11 stacks); CI enforces lint/compose validation, TruffleHog, weekly Trivy (CRITICAL); broken-stacks gate blocks merges on failures; main remains release-ready; scale: 29 stacks/86 containers/11 envs.
- Operationalized observability & incident response: 64 Uptime Kuma checks, fleet-wide logs via Dozzle, Slack/SMTP alerts, UPS-driven NUT automation for graceful shutdowns; achieved 100% core-infra uptime.
- Hardened ingress & data: Cloudflare proxy + Zero Trust, Nginx Proxy Manager for ingress, WireGuard, VLANs; host-level secrets; encrypted Vaultwarden backups; Proxmox \rightarrow NAS \rightarrow cloud, & Dokploy \rightarrow Cloudflare R2.

FlaskKeyring (Full-Stack Password Manager)

- Built a zero-knowledge password manager with client-side AES-GCM encryption and MFA for secure access.
- Deployed via self-hosted Dokploy using GitOps workflows and webhook-triggered CI/CD builds.
- Implemented Flask REST APIs with PostgreSQL and added Uptime Kuma monitoring for service reliability.

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, VMware

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

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

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

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

Databases & Tools: PostgreSQL, MariaDB, NoSQL, 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)