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Michael Barcelo

Software & Systems Engineer

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Versatile Engineer with 9+ years of experience spanning software development, DevOps, and IoT systems integration. Skilled in Python, Java, C++, and automation frameworks for building scalable backend applications, optimizing CI/CD pipelines, and connecting embedded devices to cloud platforms. Proven track record of delivering mission-critical solutions that improve reliability, reduce costs, and streamline operations across enterprise, academic, and research environments.

SKILLS

DevOps and Cloud	Azure, AWS, GCP, Ansible, Docker, Terraform, Service Fabric, Azure DevOps, Octopus Deploy, CI/CD Pipelines
Monitoring/Observability	Dynatrace, Prometheus, Application Insights, ServiceNow Integrations
Automation and Scripting	Python, PowerShell, Bash, API Development
Systems Administration	Linux (Ubuntu, Rocky, CentOS, RHEL), Windows Server, SQL Server

TECHNICAL EXPERIENCE

DevOps Engineer **Apr 2021 — Present**
Assurant Inc. *Miami, FL*

- Led the Dynatrace Support Team, onboarding, and training a 15-member Tier 1 team to manage 100+ weekly tickets, freeing senior engineers for high-impact initiatives.
- Developed Python and Ansible automations integrated with ServiceNow to streamline Service Fabric cluster updates, certificate renewals, and monitoring configurations, saving 100+ engineering hours monthly.
- CI / CD pipelines were built and maintained in Octopus Deploy and Azure DevOps for enterprise-wide deployments across national and international environments.
- Expanded observability by implementing custom monitoring strategies for web applications, backend services, and cloud infrastructure, covering 50% of the company's systems.

Systems Administrator Assistant **Dec 2019 — Mar 2021**
Florida International University, Division of Information Technology *Miami, FL*

- Created PHP-based APIs and Python scripts to integrate the Zoom infrastructure with analytics dashboards, improving remote learning experiences.
- Migrated 287 classrooms to network-enabled smart environments in 3 months, saving \$10,000 annually.
- Authored and standardized documentation for IoT-enabled systems, improving team onboarding and operational efficiency.

Media Systems Administrator (Cloud Automation Specialist) **Jan 2019 — Dec 2019**
Florida International University, College of Medicine *Miami, FL*

- Redesigned the cloud video processing workflow for the Center of Children and Families, building a Django web app to automate transcoding and upload to a Haivision-managed cloud, saving an estimated \$625,000.
- Maintained and secured CentOS servers powering media processing and research surveillance systems.

Student Assistant **Dec 2017 — Jan 2019**
Florida International University, Division of Information Technology *Miami, FL*

- Built a predictive inventory system using PHP and regression modeling to prevent equipment shortages across FIU campuses.
- Managed Red Hat/CentOS servers that support classroom technologies enabled by the Internet of Things.

IT Technician **Aug 2016 — Dec 2017**
Florida International University, Division of Information Technology *Miami, FL*

- Delivered IT support for SMB environments, including Windows Server configuration, networking, and connected device troubleshooting, and led the integration of company services into Amazon Home Services to provide consumer IoT device setup and support.

EDUCATION

Master's of Internet of Things (IoT), Florida International University • 3.6 GPA **2023**
Bachelor's of Computer Science, Florida International University • 3.15 GPA **2021**

CERTIFICATIONS

- **Amazon Web Services (AWS):** AWS Cloud Practitioner, AWS Developer
- **Microsoft:** Azure Fundamentals, Azure Developer Associate, DevOps Engineer Expert
- **Github:** Github Fundamentals, Github Actions
- **IBM:** Software Engineering Fundamentals
- **Google:** Prompt Engineering, Cloud Digital Leader, Associate Cloud Engineer