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Michael Barcelo

Software Engineer

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Software Engineer with 9+ years of experience building backend systems, automation tools, and cloud-integrated IoT solutions across enterprise, academic, and research environments. Adept at bridging hardware and software systems to solve real-world challenges in fast-paced, cross-functional teams. U.S. Citizen with a focus on delivering reliable, production-ready solutions that drive innovation and efficiency.

SKILLS

Programming Languages	Python, JavaScript, Java, PowerShell, Bash, C, C++, PHP, HTML, CSS, C#
Automation Tools	Ansible, Octopus Deploy, Azure DevOps, Git, Github, Docker, ServiceNow, and Terraform
Cloud Platforms	Azure, Amazon Web Services (AWS), Google Cloud (GCP)
Databases	MySQL, MongoDB, PostgreSQL, SQLite
Communication	English (Native Speaker), Spanish (Intermediate Speaker)
Hobbies	3D Printing, Chess, Saltwater Fishing, and IoT Development

TECHNICAL EXPERIENCE

DevOps Engineer <i>Assurant Inc.</i>	Apr 2021 — Present <i>Miami, FL</i>
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- Developed and maintained Python-based Ansible modules, automation scripts, and ARM Templates for infrastructure provisioning, deployment, and monitoring tasks across Azure and on-prem environments.
- Built full-stack automation pipelines using ServiceNow (MyIT), Ansible, and Octopus Deploy, enabling self-service deployments and reducing manual engineering effort.
- Created PowerShell and Bash scripts to automate cluster updates, application onboarding, and certificate management for Service Fabric services.
- Maintained internal web tooling site (HTML, CSS, PHP, MongoDB) to support engineering workflows and monitoring processes.
- Designed, deployed and troubleshooted CI/CD pipelines using Azure DevOps and Octopus Deploy, streamlining software deployment for multiple application teams.
- Led a 15-member Tier 1 Support team for Assurant's Dynatrace Support team, setting standards for documentation and automation handoff, allowing focus on higher-level project work and scripting.

Systems Administrator Assistant <i>Florida International University, Division of Information Technology</i>	Dec 2019 — Mar 2021 <i>Miami, FL</i>
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- Developed PHP-based RESTful APIs that served as middleware between Zoom infrastructure and executive-facing dashboards, enabling real-time analytics on class usage during COVID-19.
- Helped transition the university to virtual instruction as part of FIU's Zoom Task Force, ensuring stable deployment on all campuses.
- Led a cross-functional team to plan and execute the network onboarding of 287 classrooms across all campuses, improving troubleshooting response time and reducing annual costs by an estimated \$10,000.

Media Systems Administrator <i>Florida International University, College of Medicine</i>	Jan 2019 — Dec 2019 <i>Miami, FL</i>
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- Built a custom Django web application to automate video ingestion, format conversion, and secure upload to a Haivision-managed cloud platform, processing 40+ years of archived therapy session recordings, saving the College of Medicine an estimated \$625,000 from external vendor fees.
- Maintained and supported Linux-based systems powering clinical camera infrastructure and security footage management.

Student Assistant <i>Florida International University, Division of Information Technology</i>	Dec 2017 — Jan 2019 <i>Miami, FL</i>
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- Built a PHP-based inventory tracking system with predictive low-stock alerts using linear regression, while supporting RedHat/CentOS servers powering classroom tech infrastructure across FIU campuses.

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