

(305) 962-2338  
Hialeah, FL  
michaelb4185@gmail.com

# Michael Barcelo

## Software Engineer

michaelbarcelo.com/portfolio  
github.com/mbarc  
linkedin.com/in/michaelbarcelo

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

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

### TECHNICAL EXPERIENCE

<b>DevOps Engineer</b> <i>Assurant Inc.</i>	<b>Apr 2021 — Present</b> <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.

<b>Systems Administrator Assistant</b> <i>Florida International University, Division of Information Technology</i>	<b>Dec 2019 — Mar 2021</b> <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.

<b>Media Systems Administrator</b> <i>Florida International University, College of Medicine</i>	<b>Jan 2019 — Dec 2019</b> <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.

<b>Student Assistant</b> <i>Florida International University, Division of Information Technology</i>	<b>Dec 2017 — Jan 2019</b> <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

<b>Master's of Internet of Things (IoT), Florida International University • 3.6 GPA</b>	2023
<b>Bachelor's of Computer Science, Florida International University • 3.15 GPA</b>	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