

# Emmanuel Silva

## Junior Cloud Engineer

☎ (717) 555-0184

✉ emmanuel.silva.cloud@gmail.com

🌐 linkedin.com/example/emmanuelsilva

📍 Harrisburg, PA 17101

### STRENGTHS

- ☁ **Practical AWS Delivery**  
Built ECS, Fargate, EC2, Docker, and API Gateway prototypes; review panels valued clear decisions and usable deployment notes.
- 🔧 **Calm Troubleshooting**  
Used CloudWatch logs, metrics, dashboards, and alarms across failed scenarios; peers sought help when test evidence grew confusing.
- 🔒 **Security-Minded Design**  
Applied IAM, Okta OIDC, Auth0, and Secrets Manager in supervised labs; access reviews became easier after role boundaries were documented.
- ♥ **Clear Technical Writing**  
Turned requirements, configuration choices, tests, and support steps into readable records; faculty reviewers often praised practical detail.
- 👥 **Collaborative Learning**  
Coordinated a peer study group and shared cloud notes; classmates regularly brought difficult AWS questions for a second look.

### SKILLS

|                        |                       |                |            |
|------------------------|-----------------------|----------------|------------|
| <u>AWS ECS</u>         | <u>Docker</u>         | <u>Fargate</u> | <u>EC2</u> |
| <u>Step Functions</u>  | <u>CloudWatch</u>     | <u>IAM</u>     |            |
|                        | <u>Okta OIDC</u>      | <u>Auth0</u>   |            |
| <u>Secrets Manager</u> | <u>API Gateway</u>    |                |            |
| <u>REST APIs</u>       | <u>CI/CD</u>          |                |            |
| <u>Troubleshooting</u> | <u>Logical design</u> |                |            |

### LANGUAGES

|         |        |
|---------|--------|
| English | Native |
|---------|--------|

### SUMMARY

Recent cloud engineering graduate ready to support BlueRidge Platform Labs with practical AWS experience, careful troubleshooting, and a strong service mindset. Academic and supervised practicum work covered ECS, Docker, Fargate, EC2, **Step Functions**, CloudWatch, IAM, **Okta OIDC**, Auth0, **Secrets Manager**, API Gateway, REST APIs, and GitHub Actions CI/CD. Built **cloud-native solutions** for internal and client-facing scenarios, then documented requirements, logical designs, configuration choices, testing evidence, change requests, and production-like support steps. Enjoys working with faculty, peers, and business-case stakeholders to turn operational needs into clear technical decisions. Brings curiosity, steady follow-through, cost awareness, and genuine interest in learning enterprise cloud platforms through meaningful project work.

### EDUCATION

#### Bachelor's Degree in Information Technology, Cloud Computing Concentration

Harrisburg University of Science and Technology 🎓 GPA: 3.8 📅 2026 📍 Harrisburg, Pennsylvania

***Coursework:** AWS cloud architecture, systems analysis, information security, software engineering*

### TECHNICAL SKILLS

- **AWS Compute:** ECS, Fargate, EC2
- **Containers:** Docker, container images, deployment manifests
- **AWS Workflow:** Step Functions, state transitions, approval routing
- **Observability:** CloudWatch Logs, CloudWatch Metrics, CloudWatch Alarms
- **Identity and Access:** IAM, Okta OIDC, Auth0
- **Secrets Management:** Secrets Manager, credential rotation, environment variables
- **API Integration:** API Gateway, REST APIs, service integration
- **CI/CD Tools:** GitHub Actions, automated pipelines, deployment promotion
- **Systems Analysis:** Requirements analysis, logical design, service boundaries
- **Operations and Change:** Change control, production support, operating procedures
- **Security Testing:** Least privilege, access validation, unauthorized request testing
- **Platform Evaluation:** Vendor evaluation, configuration review, cost analysis

### EXPERIENCE

#### Junior Cloud Engineer Practicum Student

University Cloud Practicum 📅 January 2026 - May 2026 📍 Harrisburg, Pennsylvania

Supported a faculty-sponsored cloud platform initiative for a client-style case management scenario. Translated business requirements into AWS architecture, container deployments, security controls, workflow automation, monitoring, CI/CD delivery, and documented operational support. Worked under faculty supervision with review stakeholders and contributed technical recommendations, testing evidence, and change control materials.

- Designed a cloud-native case management prototype with ECS, **Fargate**, EC2, **API Gateway**, and CloudWatch, linking stakeholder needs with a practical AWS architecture.
- Packaged two REST services with Docker and separated development and test workloads, documenting task definitions, networking assumptions, environment variables, and rollback steps.
- Configured IAM roles with least-privilege policies and stored credentials in Secrets Manager, then validated access paths through controlled requests.
- Built a Step Functions workflow for document intake and status updates; used **CloudWatch** logs and metrics to trace failed transitions during demonstrations.
- Created a GitHub Actions **CI/CD** pipeline for unit checks, container image builds, and approved promotion through development, test, and production-like environments.

MY CAREER



- Junior Cloud Engineer Practicum Student at University Cloud Practicum (4 Months)
- Cloud Engineering Student Analyst at Student Cloud Engineering Lab (4 Months)
- Cloud Engineer Capstone Student at Capstone Cloud Platform Project (4 Months)
- Cloud Systems Analysis Student at University Systems Analysis Project (4 Months)

- Presented **change control**, **logical design**, operating procedures, and follow-up support plans to a review panel, earning approval for final classroom deployment.

Cloud Engineering Student Analyst

Student Cloud Engineering Lab 📅 August 2025 - December 2025 📍 University Park, Pennsylvania

Performed supervised analysis and implementation work across simulated multi-platform application environments. Compared AWS deployment patterns, identity integrations, API exposure, monitoring, configuration, and cost choices. Produced reusable standards and troubleshooting evidence that helped lab teams make clearer technical decisions and support prototype operations.

- Evaluated **ECS**, Fargate, EC2, and **Docker** deployment patterns, comparing operational effort, scaling behavior, and estimated service consumption for a simulated application.
- Implemented API Gateway routes for a REST application and tested **IAM** and Okta OIDC authentication flows in an instructor-configured sandbox.
- Integrated **Auth0** with a sample client portal and recorded token, redirect, and role-mapping behavior in a security validation worksheet.
- Used CloudWatch dashboards, logs, and alarms across four test scenarios to analyze latency and failed requests, then issued a prioritized troubleshooting report.
- Reviewed compute, networking, and logging **configuration parameters**, recommending cost-conscious settings for a low-volume prototype and its support needs.
- Wrote **technical standards** covering naming, tagging, access review, incident notes, and deployment verification for reuse by later lab teams.

Cloud Engineer Capstone Student

Capstone Cloud Platform Project 📅 January 2025 - May 2025 📍 Harrisburg, Pennsylvania

Contributed to a supervised three-person cloud platform project for a mock client operations portal. Owned systems requirements analysis, logical design, API integration, container deployment decisions, security testing, workflow automation, and technical deliverables. Connected business functions with testable AWS services and clear operating guidance for final review.

- Developed a **REST** API through API Gateway and connected it with containerized processing services, giving a mock client portal a coherent service integration path.
- Conducted five stakeholder interviews and translated **business functions** into user flows, service boundaries, data exchanges, and a logical **AWS** design.
- Created Docker images and deployment manifests for ECS, tested Fargate and **EC2** alternatives, and documented architecture selection rationale.
- Secured service-to-service access with IAM policies and **Secrets Manager** references, recording unauthorized-request evidence and credential rotation procedures.
- Configured **Step Functions** for approval routing and traced unsuccessful executions through CloudWatch logs, correcting input mappings before final presentation.
- Produced architecture diagrams, configuration tables, test results, operating instructions, and known limitations for a complete technical capstone deliverable.

Cloud Systems Analysis Student

University Systems Analysis Project 📅 August 2024 - December 2024 📍 York, Pennsylvania

Completed supervised systems analysis for a simulated client-facing service migration. Mapped **business requirements** to AWS capabilities, compared vendor and platform options, tested a Docker proof of concept, and prepared findings for cross-functional review. Work connected uptime, access control, API behavior, support procedures, documentation, and cost considerations.

- Modeled requirements for a simulated service migration, mapping **business needs** to AWS platform capabilities and documenting assumptions for cross-functional reviewers.
- Compared vendor and platform options for container hosting, identity, API exposure, monitoring, and workflow automation through a structured evaluation matrix.
- Built a Docker proof of concept on EC2, validating application reachability, security group behavior, and basic service recovery procedures.
- Drafted IAM role designs and an **Okta OIDC** integration outline that separated administrative, developer, and application access responsibilities.
- Tested REST endpoints through **API Gateway** and recorded response codes, authentication outcomes, and failure conditions in a repeatable **test plan**.

- Presented findings in a 12-minute **systems analysis** review, addressing uptime, operational support, documentation quality, and cloud cost questions.

## PROJECTS

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### Cost-Aware Cloud Service Blueprint 📅 2025

Cloud work matters most when it serves people clearly and responsibly. Built a comparative AWS blueprint for container hosting, API access, monitoring, and workflow automation, linking cost awareness with reliable client service. Project reflection focused on choosing simple technology that earns stakeholder trust rather than adding needless operational burden.

### Secure Workflow Integration Lab 📅 2025

Good cloud engineering starts with a reason: protect access, move useful information, and keep work dependable. Created a distinct security and workflow study using IAM, Okta OIDC, Auth0, Secrets Manager, Step Functions, and CloudWatch. Findings connected identity controls and failure tracing with practical support for internal users.

## LEADERSHIP & AWARDS

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- Dean's List, Harrisburg University, Fall 2024 and Spring 2025
- Cloud Platform Capstone Presentation Recognition, 2025
- Academic Excellence Scholarship, 2024 - 2026
- Cloud Computing Peer Study Group Coordinator, Harrisburg University, 2025 - 2026

## CERTIFICATIONS

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- AWS Academy Cloud Foundations 📅 2025
- AWS Academy Cloud Architecting 📅 2026
- Microsoft Learn: Azure Fundamentals Learning Path 📅 2025

## PROFESSIONAL AFFILIATIONS

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- AWS Academy Student Community Participant, 2025 - 2026
- University Technology Showcase Volunteer, 2025
- Cloud Computing Peer Study Group, Harrisburg University, 2025 - 2026

## ADDITIONAL INFORMATION

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**Work Status** : Authorized to work in United States. No sponsorship required.

## REFERENCES

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AVAILABLE ON REQUEST