

MARK O'BRIAN

Application Support Engineer | AWS | Linux | Production Operations

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PROFESSIONAL SUMMARY

Application Support Engineer experienced in restoring, modernizing, and supporting mission-critical production systems across telecommunications, fintech, and cloud-native environments. Recognized for solving difficult operational problems, extending the life of legacy applications, and delivering measurable business value. Combines a strong foundation in networking, Linux, SQL, and production systems with current hands-on work in AWS, Python, infrastructure automation, and AI-enabled applications.

KEY ACHIEVEMENTS

- Delivered an estimated \$1M in cost savings by extending the life of a legacy VoIP monitoring platform through SSH support rather than replacing the application.
- Restored a legacy provisioning application from near failure to reliable daily operation by reverse engineering undocumented business logic and modernizing critical workflows.
- Assumed ownership of production support for business-critical payment systems, reducing engineering interruptions and improving delivery predictability.
- Designed AWS infrastructure and deployment automation supporting AI-driven cloud applications while reducing operational costs.

CORE SKILLS

AWS • Linux • Python • SQL • Terraform • Docker • GitHub Actions • CI/CD • Infrastructure as Code • Datadog • Production Support • Incident Response • Cloud Architecture • Automation

PROFESSIONAL EXPERIENCE

StudLab.ai | Founder / Software Engineer

February 2026 - Present

- Architected a Python-based collector platform using a deterministic request pipeline to minimize LLM usage while providing conversational search capabilities.
- Designed and implemented a knowledge graph integrating LEGO catalog, inventory, and relationship data to support deterministic entity resolution.
- Developed REST APIs, automated data-import pipelines, and comprehensive test suites using test-driven development practices.
- Built cloud-ready application architecture emphasizing reproducibility, maintainability, and cost-efficient AI integration.

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PROFESSIONAL EXPERIENCE (CONTINUED)

Ottermon.AI | Cloud Infrastructure / DevOps Engineer

Remote | April 2025 - February 2026

- Designed reusable AWS infrastructure using Terraform and Terragrunt for development, test, and production environments.
- Built deployment automation with GitHub Actions, improving consistency and reducing manual effort.
- Implemented AWS Lambda automation to power down non-production resources outside business hours, reducing cloud costs.
- Provisioned and maintained EC2, ECS, ECR, S3, IAM, SQS, and SNS while partnering with application engineers to improve deployment reliability.
- Contributed architectural recommendations that reduced dependence on expensive observability tooling.
- Role concluded following company funding constraints.

Finvi | Software Engineer / DevOps Engineer

July 2021 - February 2024

- Supported high-availability payment-processing platforms using Go, Perl, SQL, AWS, and Linux.
- Assumed primary responsibility for production support, resolving critical issues while allowing development teams to remain focused on planned feature delivery.
- Led production releases using Jenkins, Terraform, and Chef while maintaining production stability.
- Applied MySQL, MariaDB, and AWS RDS expertise to improve database performance and reliability.
- Implemented monitoring and troubleshooting practices with Datadog and supported containerized workloads using Docker and Kubernetes.

EARLIER TECHNICAL EXPERIENCE

CenturyLink / Level 3 Communications | Software Engineer II / Network Reliability Engineer

- Delivered an estimated \$1M in savings by implementing SSH support that extended the life of a legacy VoIP monitoring platform and eliminated the need for replacement.
- Restored a legacy provisioning application by reverse engineering undocumented application logic, modernizing the interface, and eliminating provisioning bottlenecks.
- Supported enterprise monitoring platforms for high-availability telecom operations, troubleshooting distributed systems, messaging infrastructure, and application stability.
- Developed internal automation tools using Perl and PostgreSQL that improved shift turnover, ticket routing, operational visibility, and incident response.
- Supported 24x7 production environments and large-scale telecommunications infrastructure.

CERTIFICATION

AWS Certified Developer - Associate | Earned 2021 (certification period through 2024)

EDUCATION

University of Massachusetts Amherst

Bachelor of Arts, Psychology