

BRANDON SCHMERSAL

Senior Software Engineer | Backend, Platform & Cloud Systems | 6+ Years Writing Python

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PROFESSIONAL SUMMARY

Senior Software Engineer with 6+ years writing Python, now working primarily in Python and Go across infrastructure automation, backend services, and developer tooling. At Ticketmaster, scaled the Nautobot-managed production fleet from 94 to 186 devices, expanded the platform with NSX-T, FortiGate, and Infoblox automation, eliminated approximately 19,000 lines of duplicated device configuration, and optimized multiple automation pipelines. Prior work includes production incident response for enterprise Azure environments at Microsoft and infrastructure automation in financial services. Has taken AI-prototyped codebases and rebuilt them into tested, maintainable software, and is a doctoral candidate in information systems and communications.

TECHNICAL SKILLS

Languages: Python, Go, TypeScript, JavaScript

Cloud / Platform: Azure, GCP, Kubernetes, OpenShift, Docker, Ansible, Terraform, Nautobot, Infrastructure as Code

Systems / Reliability: Distributed Systems, Observability, Grafana, SNMP, Telegraf, Incident Response, Performance Troubleshooting

Backend / APIs: Node.js, FastAPI, REST APIs, OAuth, JWT, PostgreSQL

Engineering: CI/CD, GitHub Actions, GitLab, Bitbucket, Automated Testing, Code Review, Git

Web / Data: React, Next.js, LangChain, Oracle, MySQL, MongoDB

PROFESSIONAL EXPERIENCE

Ticketmaster | Senior Software Engineer, Network Services

04/2026 – Present

- Scaled the Nautobot-managed production fleet from 94 to 186 network devices, adding approximately 80 infrastructure-as-code YAML definitions and 10 device roles while expanding source-of-truth coverage across network infrastructure.
- Eliminated approximately 19,000 lines of duplicated device configuration by consolidating shared configuration into reusable source-of-truth definitions and templates, reducing configuration drift and ongoing maintenance overhead.
- Expanded the automation platform with three new subsystems: an NSX-T pipeline, a FortiGate configuration pipeline, and an Infoblox generator that automates a standard operating procedure step for IP assignment.
- Reworked Go/platform automation for performance and correctness: cut the Nautobot reconciliation service from about 20 minutes to under 2 minutes, fixed Nautobot ID-handling logic, and reduced another pipeline from about 3.5 minutes to seconds by using stored file hashes to skip unchanged preloads entirely.
- Built Python automation that generates standardized FortiGate firewall configurations from YAML source-of-truth data using Nautobot templates and device labels, with pre-deployment validation to identify out-of-scope tenant configurations, removing an hour-long manual step from tenant onboarding while reducing production-change risk.
- Contributed to Terraform-based infrastructure-as-code workflows and am migrating network observability from SolarWinds to Grafana using SNMP telemetry and Telegraf-based metric collection.
- Documented platform jobs and workflows, trained teammates, presented the platform to the wider network team, and review Python and Go changes across the team.

PNC Bank | Software Engineer → AI Data Scientist

10/2024 – 03/2026

- Built a Python application for CIDR-range validation and automated firewall checks, reducing manual workload by 60%, then refactored the application to JavaScript.
- Built a Python/LangChain application that processed SQL data, integrated with LLM services, expanded acronyms, and populated metadata fields, improving data completeness and consistency.
- Developed a prototyped Flask application into an internal AI tool that searches the bank's software inventory to tell teams whether a capability they are requesting already exists.
- Refactored and optimized Python codebases to improve maintainability and runtime efficiency by approximately 20%, while adding unit tests to strengthen release reliability.
- Built and maintained automated Selenium regression tests for API endpoints, validating behavior across production deployments and supporting reliable releases.
- Supported a production application on Red Hat OpenShift by troubleshooting pods, scaling workloads, performing restarts and configuration changes, and executing disaster-recovery testing to validate resiliency.
- Reviewed an intern's code and provided implementation feedback, onboarded teammates, and expanded internal documentation and developer guides to improve engineering effectiveness.

Microsoft (via Insight Global) | Azure Support Escalation Engineer 3 (Contract)

08/2023 – 06/2024

- Developed Python and KQL automation for Azure environment evaluations, reducing manual review time by 15% and standardizing pre-event checks.
- Debugged stack traces and performance bottlenecks across 25 Azure-deployed applications with WinDBG and PerfView, partnering with product and engineering teams on recovery and prevention.
- Resolved complex production incidents across enterprise Azure App Services environments, supporting 99.9% service availability.

BNY Mellon | Senior Production Services Application Support Analyst

09/2022 – 08/2023

- Built and deployed a backend service for encrypted personal-data processing, containerizing the application on Kubernetes in GCP and integrating Oracle via Java Spring and Hibernate.
- Automated vulnerability remediation across 200+ servers with Ansible, PowerShell, and Python, reducing patching effort and strengthening infrastructure security compliance.

SoundStack I Technical Support Specialist**04/2022 – 09/2022**

- Built a React-based internal billing application for technicians, translating workflow requirements into a web tool that improved team efficiency by 10%.

Armada Supply Chain Solutions I End User Computing Analyst**11/2019 – 04/2022**

- Automated installation and configuration workflows with Python and PowerShell scripting across a 450-user environment, reducing manual workload by 20% and accelerating system readiness.

Intermedix / R1 RCM I Support Center Technician**06/2018 – 11/2019**

- Diagnosed and resolved application issues through log analysis, SQL queries, and scripting, restoring mission-critical emergency-response systems ahead of SLA commitments.

EDUCATION

Robert Morris University**Expected 05/2028**

Ph.D., Information Systems & Communications

The Pennsylvania State University**12/2024**

M.S., Software Engineering — GPA: 3.7/4.0

California University of Pennsylvania**05/2011**

B.S., Graphic Design

SELECTED SOFTWARE PROJECTS

SurgePress — Gogithub.com/beedawn/surgepress

- Built a modular static-site generator in Go with Markdown/front-matter processing, HTML templating, RSS generation, filesystem automation, and automated testing.
- Added portable failure-path tests and GitHub Actions CI to enforce formatting, vetting, automated tests, and successful builds in clean environments.

ScrapeScholar — *Next.js*, *FastAPI*, *PostgreSQL*, *Docker*github.com/beedawn/scrapescholar

- Built a Dockerized full-stack application with a Next.js frontend, FastAPI backend, PostgreSQL storage, automated data collection, natural-language relevance scoring, and dashboard-based result exploration.