SCARLETT SCOTT

(912)615-9868 | scarlettalexscott@gmail.com | WWW: https://github.com/scarlettiron |
WWW: linkedin.com/in/scarlett-scott-9980a5bb

Professional Summary

Multidisciplinary senior engineer with 10+ years of experience in system architecture, application development, and integration development across fintech, B2B platforms, and mission-critical government software. Proven problem solver with a strong positive attitude, excellent communication skills, and a motivated, hands-on approach to delivering high-reliability systems. Experienced in debugging complex production issues and project management, with ownership of payment rails, cloud infrastructure, and orchestration platforms. Deep background in ACH/NACHA, AWS, Kubernetes, CI/CD, and secure, scalable platforms. Comfortable leading teams, owning architecture end-to-end, and thriving in fast-paced, multitasking environments.

Skills

- **Languages**: Python, JavaScript, TypeScript, Rust, C++, GoLang, Java, SQL, Bash, Sass
- **DevOps and Cloud**: K8s (kubernetes), Helm, Rancher, Git Actions, Jenkins, Ansible, Teraform, Docker, DDEV, AWS S3, AWS EC2, AWS ECS, AWS EKS, AWS VPC and VPN, Fargate, CloudWatch, Elastic Load Balancer, DataDog, Vercel, Nginx
- **Database, Storage and Search**: AWS RDS, PostgreSQL, Dynamodb, Prisma ORM, Sequelize ORM, Django ORM, Minio, AWS Elastisearch (Opensearch)
- **Realtime Communication and Event Systems**: GRPC, WebSockets, Socket.IO, WebRTC, Event Emitters, AWS Elasticache (Redis), Celery Task Queues, Kafka, Live Data Sync, webhooks
- **Methodologies and Practices**: DevOps, CI/CD Automation, Infrastructure as Code (IaC), Agile & Scrum, TDD, Asynchronous System Design, Distributed Microservice Architecture, Cost Optimization, Automated Testing, SSDLC, B2B E-Commerce.
- **Frameworks**: Nextjs, NestJs, Gin, Axum, Django, Flask, React, Vuejs, Nodejs, Express, SpringBoot, Elyra AI Pipline, Apache Airflow, Redux
- **Artificial Intelligence Data Processing and Integration**: Elyra AI Pipeline Editor, Apache Airflow DAG Orchestration, DAG Factory, AWS Bedrock, OpenCV, AI/ML Workflow Automation, PRA Workflow Execution, Metadata Tracking.
- **Security**: OAuth2, OAuth0, Keycloak, LDAP, AWS KMS, AWS IAM, Wireshark, AWS VPN, ClamAv, OpenVas, HCP Vault, Soc 2, PCI DSS, FinCEN and NACHA compliance
- **Skills, Knowledge and Other**: Plaid, Stripe, Quickbooks, ERP, Twilio, Payments Systems, Enterprise Software
- **Tools**: Kibana, Kythera, Cypress, Postman, Hookdeck, Linux

Work History

Team Lead /Full Stack Software and DevOps Engineer 05/2024 - Current
Lumber Marketplace LLC – Columbia, TN
Responsibilities & Leadership

- Lead engineer for architecture, hands-on development, DevOps, and production operations across multiple high-availability systems.
- Drive backend and frontend development, code reviews, CI/CD, and cloud infrastructure.
- Partner with product, legal, banking, and vendors to deliver compliant, secure, high-performance systems.
- Lead sprint planning, execution, and technical direction for the engineering team.
- Worked directly with enterprise customers to gather business and technical requirements, define integration needs, and coordinate onboarding, platform configuration, and deployment of white label software solutions.
- Guided customers through ERP integrations, payment configuration, and platform adoption, troubleshooting implementation issues and ensuring solutions aligned with their existing business workflows.

Core Platforms & Impact
ACH Banking Platform (Python, Django REST, Celery, Plaid)

- Sole architect and developer of production ACH system processing **$200K+ monthly volume**.
- Built NACHA file generation + SFTP delivery, cutting settlement time from **4 days to 1**.
- Reduced costs via direct ACH batching (**$0.75 per batch up to $1M**).
- Implemented full payment lifecycle: payments, payouts, refunds, subscriptions.
- Delivered real-time webhooks, KYC/KYB compliance flows, TIN matching with IRS, and full NACHA compliance.
- Implemented API key auth, IP allowlisting, secrets management and passed third-party pen testing.

B2B Orders & Freight Platform (Next.js, NestJS, TypeScript, Prisma, Stripe, In-house ACH, EDI/X12, Kafka/Queues)

- Built high value B2B order system covering payments, freight booking, shipment tracking, payouts, refunds, and inventory.
- Implemented dual payment rails (Stripe + ACH) with automated seller settlements.
- Integrated ArcBest (REST) and TMC (X12 EDI), enabling automated pickup, delivery, and carrier coordination.
- Designed background job pipelines for shipment polling, webhooks, and settlement processing.

Seller Portal (Pro Portals) (AWS Cognito, OpenSearch, Socket.IO, Vercel)

- Designed end-to-end architecture for seller-focused B2B portal integrating core business systems.
- Built product & variant management with OpenSearch powered search and filtering.
- Added seller managed shipping logic, dynamic mileage pricing, credit terms, and discounting engine.
- Implemented real time messaging, analytics dashboards, and customer access management.
- Deployed frontend on Vercel with per-seller domains; backend on AWS with CI/CD automation.

ERP Integration Platform (Rust, Axum, SeaORM, Kafka)

- Built multi-tenant ERP integration system enabling customers to connect multiple ERP systems via scalable, event-driven architecture.

Infrastructure, SRE & DevOps **(** AWS, Docker, GitHub Actions, DDEV**)**

- Own AWS infrastructure across prod/staging/beta using Terraform, EC2, RDS, S3, ElastiCache, OpenSearch, Route 53, SES, Cloudflare.
- Built CI/CD with Docker + GitHub Actions; implemented logging, monitoring, virus scanning, and vulnerability detection.
- Manage DNS, scaling, uptime, and secure deployment workflows.

Senior Full Stack /Senior DevOps Engineer 01/2021 - 05/2024
RTX Aerospace | **Forge MDPAF – Missile Defense Ground System** – Aurora, CO
Senior engineer on the **Future Operationally Resilient Ground Evolution (FORGE) Mission Data Processing Application Framework (MDPAF)**, a **platform agnostic**, modular system supporting both **on-prem** and **cloud (Xeta Cloud)** deployments for processing **OPIR satellite data** in support of U.S. Space Force missile warning and space domain awareness. Led or solely implemented multiple mission-critical systems across orchestration, APIs, deployment tooling, and operations dashboards.

Space Force Article: FORGE MDPAF
Global Defense Article: FORGE MDPAF
RTX Aerospace Article: What is FORGE MDPAF

Tech Stack: Apache Airflow, Elyra, Golang, Python, Django, Flask, React, Nextjs, TypeScript, Javascript, VueJs, AI/ML Pipeline Tooling, MinIO, PostgreSQL, Keycloak, Helm, Kubernetes (k8s), Docker, Jenkins, Bitbucket, Nexus, VPNs, VMs, Bash, Kythera, Umbra

Workflow Orchestration Platform

- Led DAG development for complex OPIR processing pipelines, enabling parameterized PRA workflows, templating, retries, and structured logging.
- Integrated internal tools and external services into Airflow with logging, monitoring, and failure recovery for mission-critical reliability.

Centralized Orchestration API

- Built and maintained a Golang REST and gRPC control plane serving as the secure communication layer between platform services and Airflow.
- Implemented authenticated DAG triggering, status tracking, metadata logging, payload validation, and resilient error handling for high-reliability environments.

Mission Operations Dashboard (Backend + Frontend)
- Co-developed a React and TypeScript operations console for monitoring DAGs, logs, PRAs, alerts, and Automated Workflow Events.
- Built and maintained the Django REST API powering the UI, including RBAC, audit logging, and secure authentication via Keycloak.
- Integrated the Elyra Pipeline Editor to enable low-code AI/ML workflow construction with MinIO-backed artifacts and direct Airflow execution.

Image Dropbox Application (Frontend + Backend)
- Sole developer of an application packaging and deployment platform for Kubernetes based services across on prem and cloud environments.
- Implemented Helm override support, certification validation, artifact management, and Jenkins driven automated deployments.
- Delivered a unified UI for redeployments, status monitoring, and lifecycle management, streamlining deployment operations.

Infrastructure & Tooling
- Managed deployment of all services using **Kubernetes** and authored **Helm charts** for dev, staging, and production environments.
- Built and maintained **CI/CD pipelines using Jenkins**, integrated with **Bitbucket** for version control and **Nexus** for artifact storage.

Contract Senior Software Engineer 03/2020 - 08/2021
OneClick Healthcare Payments (Now Hello Payments) – Remote
Hourly Based Contracted Senior Software Engineer.
Tech Stack: Python, Django, Celery, Redis, AWS, DynamoDB, Keycloak
- Contributed to the development of a Python based ACH and card payment processing platform serving healthcare providers and clinics.
- Built and maintained backend APIs for secure transaction initiation, validation, reconciliation, and settlement across ACH and card networks.
- Implemented robust error handling, idempotent transaction workflows, and reporting systems to support financial operations.
- Ensured strict adherence to HIPAA and PCI-DSS compliance, including encryption in transit and at rest, access controls, audit logging, and secure handling of PHI and payment data.

Contract - Full Stack DevOps Software Developer 02/2018 - 01/2021
Stray Technology LLC
Tech Stack: Primarily C++
Collaborated directly with government and commercial clients to gather technical and functional requirements, establish project specifications, and support onboarding, software integration, and implementation.

Government Software Contracts
- Developed and maintained specialized software solutions for government contracts, primarily using C++ and other technologies based on project requirements.
- Worked on proprietary black box software, internal systems, and custom applications developed to meet specific contractual requirements.
- Collaborated directly with clients to gather requirements, establish project scope, clarify technical specifications, and coordinate implementation, onboarding, and delivery.
- Designed, developed, and tested software components and integrations to support various client and project needs.

Financial Technology & Payment Systems

- Developed and maintained software solutions for financial technology contracts, including payment gateway systems and integrations.
- Implemented REST APIs, WebSocket services, and backend functionality to support communication between applications and external financial systems.
- Worked directly with clients to gather business and technical requirements, coordinate integrations, and support implementation and onboarding.
- Contributed to the development, testing, troubleshooting, and maintenance of financial software applications.

Lead Full Stack Software Engineer 06/2012 - 03/2018
SDH Federal Construction INC
Government Software Contracting Division

- Worked directly with government and commercial clients to gather software requirements, define project scope, clarify technical specifications, and coordinate implementation, onboarding, and final delivery.
- Approximately two and a half years into employment, transitioned into government software contracting as the company expanded beyond its existing federal construction operations.
- Led the software contracting division, overseeing projects throughout the complete contract lifecycle, from evaluating opportunities and preparing quotes to software development, testing, final delivery, and customer handoff.
- Evaluated project requirements, estimated development effort, prepared technical proposals, and determined implementation approaches for government software contracts.
- Designed, developed, tested, and delivered custom software solutions based on individual contract requirements while remaining actively involved in hands on engineering.
- Coordinated technical requirements, project execution, and delivery commitments to ensure completed software met contractual specifications.
- Continued supporting and maintaining the company's internal business software alongside government contract responsibilities.

Internal ERP and Business Management Platform

- Began as a junior software engineer developing and maintaining an internal ERP style application supporting billing, bookkeeping, financial record management, and daily business operations.
- Designed and developed backend services and REST APIs using Python and Django REST Framework, with a React frontend for staff and customer access.
- Integrated Stripe payment processing, payment verification webhooks, and automated billing reminders using Mailgun and Twilio.
- Developed authentication, account management, and financial reporting functionality to support internal operations, tax preparation, and auditing.
- Automated manual business processes, improving financial recordkeeping efficiency and reducing billing discrepancies.

Education

Bachelor of Science: Cyber Security Expected in 07/2028
Western Governors University - Salt Lake City, UT

Bachelor of Science: Computer Science 2015
Harvard University - Cambridge, MA

Cloud Development 08/2025
AWS Cloud Practitioner

TweakTags | Open Source Content Management System

Creator, Lead Developer & Maintainer
Technologies: TypeScript, JavaScript, React, Next.js, Node.js, PostgreSQL, MySQL, MariaDB, SQLite, JWT, AWS Cognito, npm, GitHub Actions

- Published TweakTags on the npm Registry, making the open source package publicly available for installation and integration through npm.
- Architected and developed TweakTags, an open source, self hosted content management system (CMS) and visual editor that enables inline content editing within existing web applications without requiring a separate CMS

platform.
- Designed a modular npm package ecosystem supporting Next.js, React, and vanilla JavaScript, allowing developers to integrate content management capabilities with minimal changes to existing applications.
- Developed a database abstraction layer with interchangeable adapters supporting PostgreSQL, MySQL, MariaDB, and SQLite, including automated schema migrations and database management through a custom CLI.
- Implemented multiple content editing interfaces, including direct inline editing, popup editors, and a full administrative dashboard supporting plain text, rich text, and media content.
- Engineered secure authentication and authorization with JWT, role based access controls, refresh token rotation, session revocation, CSRF protection, and optional AWS Cognito integration.
- Built support for multi tenant deployments, white label customization, configurable themes, and user administration.
- Developed automated testing and continuous integration workflows to validate compatibility across supported databases and runtime environments.
- Published and maintain the TweakTags npm package ecosystem, open source repository, developer documentation, and interactive demonstration.

Links:
GitHub: https://github.com/scarlettiron/tweaktags
Documentation and Demo: https://scarlettiron.github.io/tweaktags/
npm Registry: https://www.npmjs.com/package/tweaktags

Remote Viewing Security Camera System -- Full Stack

- Full stack application including asynchronous local home server. Camera security system users can view remotely featuring phone alerts when an unknown person is on the property. Features object detection and facial recognition.
- Websockets, Django Rest Framework and Channels, React, Redis, Twillio, AWS S3 Raspberry Pi, ESP 32 Cam. Libraries: OpenCv, requests, asyncio, multiprocessing
- Camera units connect to custom asynchronous local websocket server where their data and socket is stored in a map using their unit ID as the key for faster retrieval of unit information.
- Camera frames are processed with OpenCv object detection. If a person is present and their facial recognition encodings cannot be found in allowed persons, an alert is sent via text message to head of household. The frame containing the intruder is saved and uploaded to an AWS S3 bucket, a record of the incident is saved in the applications database.
- Remote Viewing: user sends ping from frontend through remote server to the local server via sockets containing the ID of the unit they are wanting to view the video stream of. Frames are then forwarded individually from the local server over sockets to the user. This ensures that the cameras ip address is never public and reduces the risk of someone unwanted viewing the streams.