

DAYEL BLAKE OSTRACO

Full Stack AI Engineer | Secure Systems Architect
DoD-Cleared Technologist | Mission-Focused Innovator

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SUMMARY OF QUALIFICATIONS

Senior Software Engineer & AI/ML Solutions Architect with 17 years of experience designing and delivering **secure, full-stack platforms** for **federal, defense, and public sector** missions. A hands-on technologist who codes daily, integrating **GenAI models, LLMs, and data pipelines** into **scalable applications** using **Python, Java, React, Azure, and AWS GovCloud**. Expert in **back-end architecture (RESTful APIs, microservices, containerization)** and **front-end development** with **React** and **TypeScript**. Trusted by the **DoD, DHA, and SSA** to build **high-impact systems** aligned with **Zero Trust principles, ATO, and RMF** compliance. Proven leader of **Agile teams**, with deep experience in **GitLab-driven DevSecOps pipelines** and **secure AI/ML integration**. Holds **CISSP, AWS Solutions Architect** certification, and an active **DoD Secret clearance**.

PROFESSIONAL EXPERIENCE

Cloud Solutions Architect III, Modus21, Charleston, SC

March 2025 – Present

- Lead **architect and integrator** for **Navy ERP** and **USMC DAI** financial systems into the **AWS GovCloud**-hosted **Foreign Military Sales (FMS)** platform (**S³ALE**), enabling **secure cross-agency data interoperability** and **cloud-native modernization**.
- **Designed, developed, and deployed AI/ML-powered services** within **secure DHA enclaves** using **LLaMA 4, LLaMA Vision, Ollama, and Mistral**—integrated with **SQL and NoSQL data sources (PostgreSQL, MongoDB, CosmosDB)** to support **model input/output, decisioning pipelines**, and emerging **PaaS/aaS inference architectures**.
- Integrated **NIPR GPT** agents directly into **Foreign Military Sales** workflows and **Obligational Authority** pipelines, enhancing **decision automation** and **GenAI-assisted operations**.
- Successfully secured multiple **ATOs** for bleeding-edge platforms including **Iroha2 Blockchain, OpenWebUI, nest.js, and Ollama AI**, working across **RMF, STIGs, and Zero Trust** postures.
- Led the **modernization** of legacy **DHA healthcare platforms** by transitioning from **monolithic stacks** to **microservices-based, Kubernetes-orchestrated architectures**.
- Designed containerized deployments using **distroless FIPS 140-3** images (**IronBank/Chainguard**) and **Zero-CVE baselines (Chainguard/IronBank)**, leveraging **React.js, Node.js/NestJS, Python, and Spring Boot**.
- **Developed a User Authorization service** atop **DoD federated identity (IAS, DS Logon)**, extending **OAuth-based roles and permissions** per application to enable **secure, fine-grained access control** within **mission-critical workflows**.

Director of Government Product Development, Equifax, Washington D.C.

July 2019 – March 2025

- **Directed development of a secure Income and Identity Verification platform for Equifax Government Services**, delivering Web and API-based services to **State and Federal agencies** (e.g., **CMS, SSA**).
 - Enabled real-time verification workflows supporting **public benefits eligibility, identity validation, and fraud detection**.
 - Platform supported **10M+ daily transactions** and contributed to **\$1.7B+ in cumulative program revenue**.
- Led the end-to-end design and deployment of an **AI/ML-powered decisioning platform** automating social service eligibility using **GenAI models**, federal policy logic, and real-time data integration delivering measurable reductions in backlog, fraud, and determination timeframes.
- Architected **scalable data pipelines** using **Apache NiFi, Kafka, and MIFlow**, integrating Equifax data services with federal APIs to support real-time case adjudication and AI model inference.
- Integrated **Ollama, Google Gemini, and Vertex AI** into operational workflows, enabling explainable GenAI-based determinations aligned with agency policy constraints.
- Delivered the platform with full **FedRAMP and HIPAA compliance**, securing deployment through **Social Security Administration (SSA)** sponsorship and meeting FISMA/NIST controls.
- Served as **technical lead for unified data services**, integrating sensitive identity and income data from payroll providers, gig platforms, tax records, incarceration data, and third-party brokers into a centralized, scalable PaaS platform.
- Coordinated rapid deployment of **disaster relief data solutions Disaster Supplemental Nutrition Assistance Program (DSNAP)** during **Hurricane Ian** with the **State of Florida**, enabling real-time identity/income verification under urgent, high-risk conditions.

Founder, Catapult Blockchain, Charleston, SC and Singapore

July 2017 – Sold to Lixens June 2019

- **Founded and led** a secure identity engineering firm delivering **cloud-native, API-driven solutions** for **high-security banking** and **federal mission environments**, integrating **global and hybrid distributed ledgers**.
- **Designed, led, and implemented mSTAX**, a secure, modular **full-stack platform** for the **Department of the Navy (DoN)** and **Defense Health Agency (DHA)** to evaluate and operationalize **AI/ML and LLM-based inference workloads** in mission-critical environments.
 - **Authored the full codebase** in **Python** and **JavaScript**, with support for **model scoring, benchmarking**, and analytics across **GPU/CPU environments**.
 - Integrated **AWS SageMaker** and **Gluon** to develop predictive models using **clinical datasets** (e.g., echocardiograms, stress tests) for early detection of **atrial fibrillation**, within a platform that achieved a **successful ATO** under **HIPAA** and **MEDCOI** compliance.
 - **Led an Agile development team**; mSTAX was showcased at the **2018 DHA Open House** as “**the future of all mobile and web technologies for the DoD.**”

- Developed the **Linxens dLoc platform**, combining **blockchain** and **NFC-linked physical documents** to create **tamper-resistant digital twins**, reducing **fraud** across **financial** and **government systems**.
 - Designed and deployed **containerized microservices** and **blockchain-backed data stores** across **AWS** and **Azure**, enabling **cross-cloud identity assurance** and **document verification workflows**.
 - Applied **machine learning** for **anomaly detection** and **identity confidence scoring**, enhancing **real-time fraud prevention** and compliance within **multi-agency border and customs** environments.
 - Led **multi-region cloud deployments**, **hybrid security architecture**, and **regulatory compliance planning** aligned with **global financial**, **privacy**, and **post-Brexit** frameworks.
 - Directed **cross-functional engineering teams** across full lifecycle delivery for **national identity programs**, **financial services**, and **secure digital credentialing initiatives**.

Chief Engineer, CACI International Inc., Charleston, SC

March 2016 – June 2017

- Led a **15-person cross-functional engineering team** to architect and deliver a **Big Data medical information platform** supporting the **Defense Health Agency (DHA)**, **VA**, and **all five branches of the U.S. Armed Forces**.
- **Directed the design and delivery of the Agile Core Data Access Layer (ACS-DAL)** for **NIWC-LANT**, enabling **secure, scalable transformation and transport of clinical data** in support of the **MHS GENESIS** backend.
- Engineered **modular Python-based services** and **RESTful APIs** for seamless data exchange across **DoD networks**, integrating **SQL** and **NoSQL** data layers. Ensured architectural alignment with **segmented access controls**, **least-privilege enforcement**, **RMF**, and **Agile DevSecOps** best practices.
- Designed and deployed **scalable, multi-tenant microservices** across **AWS GovCloud** and **DoD (.mil) infrastructure**, enabling resilient, modular processing of healthcare and personnel data in **high-security environments**.
- Engineered over **50 secure ingestion pipelines** handling terabytes of daily data in **HL7**, **FHIR**, **CSV**, and **OMAP** formats, with full **ingress/egress planning** and real-time transformation across military and partner systems.
- Developed **advanced analytics and machine learning models** across 20+ federal data sources using **Python**, **R**, **TensorFlow**, and **Tableau**, improving **clinical insights**, **resource allocation**, and **operational decision support**.
- Established a **DevSecOps model** leveraging **microservices**, **container orchestration**, and **automated deployments**, ensuring scalable, secure delivery under **ATO** and **RMF** constraints.

Founder / Chief Technology Officer, Qconceptual, Inc., Charleston, SC

June 2014 – Sold in December 2016

- Scaled **Qconceptual** from a **single-person operation** to a **15-developer, \$6.5M/year engineering firm**, serving large-scale **federal and commercial clients** with **cloud-native software solutions**, culminating in a **successful acquisition**.
- Led **cloud infrastructure strategy** and **DevOps engineering**, overseeing the **recruitment, mentorship**, and **technical growth** of engineering and platform teams delivering **secure and scalable solutions** across multiple domains.
- Architected a **microservices-based infrastructure** of **reusable, modular APIs** designed to accelerate **time-to-market**, minimize **technical debt**, reduce service update cycles, and optimize **cloud resource utilization** and profit margins.
- Directed **hybrid-cloud solution design and deployment**, advising clients on **public, private, and hybrid cloud strategies**, integration with enterprise systems, and **cloud service selection** based on **scalability, security, and cost efficiency**.
- Provided **technical leadership and oversight** across **architecture reviews, cloud migration planning**, and **development lifecycle optimization**, aligning delivery with **Agile, DevSecOps**, and **Infrastructure-as-Code** methodologies.

Director of Mobile Development, Starwood Hotels & Resorts / Marriott., Stamford, CT

July 2013 – June 2014

- **Led architecture and development** of the SPG mobile platform, delivering flagship iOS, Android, and Apple Watch apps used by millions globally. **SPG Watch app** featured during Apple's 2014 keynote.
- Designed the **first mobile check-in/keyless room system**, enabling BLE/NFC-based access and hybrid cloud integration between legacy infrastructure and AWS.

Director of Software Engineering/Mobile Evangelist, Booz Allen Hamilton, Charleston, SC

February 2011 – July 2013

- **Directed engineering strategy** across three business lines and 75+ engineers, leading delivery of secure, cloud-integrated platforms for federal and military clients.
- Served as **Tactical Lead for VBMS**, coordinating Agile delivery across 12 cross-functional teams in a 30-team VA modernization effort.

TECHNICAL PROFICIENCIES

Languages & Frameworks	Python, Java, JavaScript, TypeScript, React, Node.js, NestJS, CSS, SQL, YAML, JSON
Cloud & Infrastructure	AWS GovCloud, Azure, GCP, Docker, Kubernetes, GitLab, CosmosDB, PostgreSQL, MongoDB
AI/ML & Data	TensorFlow, Apache NiFi, Kafka, LLMs (e.g., Gemini, OpenAI, LLaMA), Prompt Engineering, MLflow, Model Lifecycle Management (Experimentation, Versioning, Benchmarking)
Security & Compliance	RESTful APIs, Zero Trust, RMF, ATO, DevSecOps, Agile, HIPAA, MEDCOI

CERTIFICATIONS & CLEARANCES

- **Certified Information Systems Security Professional (CISSP)** — *Issued by (ISC)²*
- **AWS Certified Solutions Architect – Associate** — *Issued by Amazon Web Services (AWS)*
- **Active DoD Secret Security Clearance** — *Adjudicated by U.S. Department of Defense*

EDUCATION

State University of New York, Purchase

- B.A. in Computer Science
- B.A. in Mathematics