

FUNSO OJE

Pullman, WA | (509) 715-8590 | funsooje@gmail.com
linkedin.com/in/funsooje | github.com/funsooje | funsooje.dev

SUMMARY

Software engineer with 15+ years building and developing production systems, currently finishing a Ph.D. in Computer Science (ABD). Ten of those years were spent delivering infrastructure monitoring and IT service management systems at enterprise scale, moving from implementation to solution design and Tier 3 escalation across estates of 2,000+ servers. Alongside that, published scalable-algorithms research over a 289-million-point dataset, and has led a membership and event operations platform that has run in production for 15 years and serves a 1,397-site organization.

TECHNICAL SKILLS

Languages C#/.NET, Python, SQL, R, Bash, C++, Java

Data PostgreSQL, MSSQL, MySQL, SQLite, Redis, Entity Framework Core, Pandas/NumPy, GeoPandas/Shapely, Google Earth Engine

Web ASP.NET, .NET Core, React, Next.js, REST API design

Systems & Cloud Linux/Unix, Solaris, Windows Server, Docker, Git, CI/CD, GCP

Architecture & Practice Schema design and zero-downtime migration, authentication and authorization design, OAuth2/OIDC and SSO, role-based access control, audit logging, incremental replatforming, Tier 3 incident escalation, ITIL Incident/Problem/Change

Enterprise Platforms BMC Remedy, ProactiveNet, Atrium Discovery (ADDM), Capacity Optimization, Patrol, Impact Manager

EXPERIENCE

Software Engineer (Contract)

2026 – Present

MedulaWorks Limited

- Design and build .NET 8 backend services for client products, from architecture decisions through staging deployment.
- Designed a strangler-fig migration that places .NET middleware in front of a legacy Django backend. Endpoints move to native implementations one at a time behind a fixed API contract, so the client never has to change with them.
- Built a KPI scoring engine for an enterprise client: composable normalisers, aggregation strategies, rating bands and composite calculation over a versioned weighting model.
- Designed the access-control model for a practice-management platform: nested organisation and office scopes, time-boxed grants, permissions defined in code with roles composed from them in data, and fail-closed defaults. Backed it with an append-only audit trail enforced by a database trigger, because the service connects as table owner and would otherwise bypass permission-based restrictions.

Research Assistant, Scalable Algorithms for Data Science Lab

Aug 2021 – Present

Washington State University, Pullman, WA

- Designed and published HierGP, a hierarchical grid partitioning framework. It reduced a 289,446,156-point spatiotemporal dataset by 97.45% and cut downstream processing to under 5% of the original volume, within set accuracy thresholds. Published in *ACM Transactions on Spatial Algorithms and Systems*.
- Benchmarked it against Uber H3, the S2 Geometry Library and GeoHash on datasets from 1,000 to 10,000,000 records. HierGP used less time and less memory at every size tested, and the margin widened as record count grew.
- Built detection algorithms that identified 156,405 visit events in noisy GPS data from 357 participants, using semantic clustering, building shapefiles and spatio-temporal heuristics. Validated against a commercial baseline at Spearman 0.58, $p < 0.0001$.

- Built environmental metric pipelines over Google Earth Engine and geospatial databases, covering vegetation index, temperature, air pollution and park proximity.
- Architected a full-stack analysis platform in React, .NET, Redis and PostgreSQL, and built it from the database schema up.

Project Lead, Membership and Event Operations Platform

2010 – Present

Nonprofit organization (*volunteer*)

- Lead a 130,000-line platform across four repositories, built on .NET Core, PostgreSQL, Redis and Next.js. It has run in production for 15 years and holds 109,855 member records across 1,397 branches, 226 zones and 55 districts. Runs on Docker across development, staging and production.
- Started it in 2010 as tools for individual events. Consolidated it into one organization-wide platform from 2015, when a second engineer joined and the code went under version control.
- Built the event operations side: registration, accommodation allocation, meal-location distribution, token issuance and ID card batches. It has processed 245,756 registrations, including 25,561 for a single event.
- Designed the reporting layer. It produces attendance, membership, duty and event reports with Excel export at every level of the organizational tree.
- Migrated the backend from .NET Framework to .NET Core and rewrote the frontend in Next.js 15 and React 19, covering 77 pages and 155 components. Applied 77 EF Core migrations with no data loss or downtime, against a system that is in use year round.
- Moved authentication to Auth0 and brought authorization into the application, with role and permission scoping across the hierarchy, permission-gated endpoints and time-bounded access. Added audit logs, soft deletes and history tables so changes stay traceable.

Principal Consultant

Feb 2018 – Aug 2019

Blue Turtle Technologies, Lagos, Nigeria

- Led design and delivery of enterprise monitoring and IT service management systems for banking and telecom clients. Acted as primary solution consultant on multi-phase deployments, gathering requirements, designing the solution and sequencing the rollout with client stakeholders through go-live.
- Delivered monitoring across 2,000+ servers for MTN Nigeria, with dashboards, KPIs and automated incident escalation wired into their ITSM workflows.
- Built custom full-stack extensions where the vendor products fell short, including configuration drift detection that reported unauthorized configuration file changes on monitored hosts, and dynamic monitoring interfaces.
- Led a 5-engineer team inside a 50+ person engagement. Acted as Tier 3 escalation and owned root-cause analysis.
- Ran the quality gate on deliverables before production deployment.

Senior Systems Analyst

Aug 2015 – Feb 2018

Blue Turtle Technologies, Lagos, Nigeria

- Deployed and configured enterprise monitoring and ITSM platforms end to end: infrastructure setup, integration, testing, and validation of Incident, Problem and Change Management workflows.
- Performed gap analysis against client requirements and worked with solution architects to adapt system designs. Ran QA on deployments, mentored junior analysts, and built the documentation, training material and reusable implementation templates the team deployed from.

Systems Analyst

Nov 2009 – Aug 2015

African Legend Indigo, Lagos, Nigeria

- Deployed and maintained asset discovery and dependency mapping (BMC ADDM), monitoring and ITSM platforms for telecom and financial clients, covering hundreds of devices.
- Migrated a production monitoring console from Windows to Solaris with no service interruption.
- Delivered on-site implementation and post-deployment support, keeping critical infrastructure visible to the operations teams that depended on it. Wrote the usage guides and administration manuals those teams worked from.

Earlier Experience

2005 – 2009

Application Developer, Resourcery PLC (2008–2009). Internal web portals, plus .NET backend, text-to-speech and SOAP services for a banking voice platform at Diamond Bank Nigeria. **Solution Developer**, CompuSoft Technologies (2006–2008). ASP.NET enrollment, grading and transcript systems serving 5,000+ students at a Nigerian university, and Classic ASP to ASP.NET migrations. **First Line Support**, LM Ericsson (2005–2006). Telecom charging systems, SLA-tracked incident escalation.

SELECTED PROJECTS

HierGP, Hierarchical Grid Partitioning · *Python, PostgreSQL, Google Earth Engine*. Reference implementation of the partitioning framework described above. github.com/funsooje/HierarchicalGridPartitioning

Songbook Content Platform · *TypeScript, Cloudflare Workers, R2, React*. Content backend and admin portal publishing versioned manifests to offline-first mobile readers. Serves 713 songs and 350 further items; the iOS app shipped in 2025 and content is still published through the portal.

Visitor Follow-Up Platform · *Next.js, PostgreSQL, Drizzle, Twilio*. Multi-tenant guest follow-up over SMS and WhatsApp, with conversation threads owned by the team rather than one volunteer's phone. Tenant scope is derived server-side across 35 API routes rather than passed by callers.

Children's Lessons · *Flutter, Dart, Cloudflare Workers, Hive*. One codebase packaged for Android, iOS, Windows and macOS, with local caching so content stays available offline.

File Integrity Monitoring System · *.NET, C#, MSSQL*. Detects and logs unauthorized file changes over time. Built for a graduate computer security course, modeled on the drift detection work delivered at MTN Nigeria. github.com/funsooje/FileChangesMonitoring

EDUCATION

Ph.D., Computer Science, Washington State University · *ABD, defending Fall 2026*
Scalable algorithms and data frameworks for high-dimensional spatiotemporal data.

M.Ed., Educational Psychology, Washington State University · 2021

B.Eng., Electrical Engineering, University of Ilorin, Nigeria · 2007

CERTIFICATIONS

Deep Learning Specialization, DeepLearning.AI (2020). **Google Cybersecurity Professional** series (2024): Foundations of Cybersecurity; Play It Safe: Manage Security Risks; Connect and Protect: Networks and Network Security; Tools of the Trade: Linux and SQL. **Certified in Cybersecurity (CC)**, ISC2, 2024 (*lapsed; reinstatement in progress*). BMC certified training in Capacity Optimization, Atrium Discovery and ProactiveNet (2012).

TEACHING AND AWARDS

Outstanding Graduate Teaching Assistant Award, Voiland College of Engineering & Architecture, WSU (2024–25). **Graduate Teaching Assistant Award**, Computer Science Dept., WSU (2024–25). Teaching assistant in Data Science and Automata Theory, roughly 200 students and 10 mentored project teams. Instructor on a university summer programming camp for 6 years, 100 students in 2026.

SELECTED PUBLICATIONS

- Oje, O., Stirewalt, T., Amram, O., Hystad, P., Amiri, S., & Gebremedhin, A. (2024). HierGP: Hierarchical Grid Partitioning for scalable geospatial data analytics. *ACM Transactions on Spatial Algorithms and Systems*, 11(2).
- Oje, O., Amram, O., Hystad, P., Gebremedhin, A., & Monsivais, P. (2025). Use of individual Google Location History data to identify consumer encounters with food outlets. *International Journal of Health Geographics*, 24(1).
- Amram, O., Oje, O., Larkin, A., Boakye, K., Avery, A., Gebremedhin, A., Williams, B., Duncan, G. E., & Hystad, P. (2024). Smartphone Google Location History: a novel approach to outdoor physical activity research. *Journal of Physical Activity and Health*, 22(3).

Full publication list at funsooje.dev