

SAI NIKHIL KROSURI

Full-Stack Engineer | Agentic AI & Enterprise Automation
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PROFESSIONAL SUMMARY

Full-stack engineer with 3+ years of professional experience building and shipping production enterprise systems in Python/Django, including a deployed **agentic AI assistant** (LangChain + Claude tool-calling over live enterprise data) and a multi-tenant, event-driven SaaS automation platform. Hands-on with prompt engineering, structured outputs, RAG patterns, human-in-the-loop agent design, OAuth 2.0 / SSO, REST API design, and end-to-end delivery architecture through production deployment, monitoring, and user training. Experienced evaluating build-vs-buy for enterprise AI tooling and enabling technical and non-technical users through documentation and training.

TECHNICAL SKILLS

GenAI & Agentic AI: Claude / Anthropic models (Azure AI Foundry), LangChain, agent tool-calling & orchestration, prompt engineering, RAG, Pydantic structured outputs, human-in-the-loop workflows, AI build-vs-buy evaluation (Microsoft Copilot Studio)

Languages: Python, JavaScript, SQL, Java, R, HTML/CSS

Frameworks & Architecture: Django, Django REST Framework, REST API design & integration, webhooks & event-driven architecture, idempotent event dispatch, multi-tenant SaaS, pandas, ReportLab

Cloud, DevOps & Delivery: Microsoft Azure (AI Foundry, App Services, Functions), AWS, CI/CD, Git, IIS / Windows Server, Sentry monitoring, structured logging, TLS/CSP/HSTS hardening

Identity & Data: Microsoft Entra ID (OAuth 2.0 SSO, app-only auth), Microsoft Dataverse Web API, SQL Server, PostgreSQL, Stripe billing & webhooks

GIS Platform Engineering: ArcGIS Enterprise / Online, ArcGIS REST & Python APIs, Survey123 webhooks, Experience Builder

PROFESSIONAL EXPERIENCE

Allworld Project Management - GIS/IT Analyst (Python Automation & Backend Development)

Jul 2025 – Present

Memphis, TN • Full-time • Developer on two production enterprise applications, design through deployment

Enterprise RAID Management Platform with Agentic AI Assistant ([link](#))

- Designed, built, and deployed a production Django web application replacing a spreadsheet-based RAID (Risks, Actions, Issues, Decisions) process — serving project managers across 10+ concurrent client projects and 1,100+ live records.
- Engineered an **agentic AI assistant** with LangChain and Claude (Azure AI Foundry): tool-calling over live Microsoft Dataverse data, Pydantic-validated structured outputs, and a human-in-the-loop “draft-a-ticket” flow enabling natural-language and voice queries against project data.
- Integrated Microsoft Entra ID single sign-on (django-allauth) and a Dataverse Web API backend with app-only OAuth 2.0, delivering credential-free login inherited from the corporate tenant.
- Built a client-side cross-filtering analytics dashboard (vanilla JS/SVG) with server-side pagination and caching, scaling to 50K+ records; added full audit trail, automated overdue-reminder digests, filter-aware PDF/Excel export, and a deterministic collision-free ticket-ID system.
- Led a build-vs-buy evaluation of Microsoft Copilot Studio against the custom agent, documenting authentication, governance, and live-data limitations to inform enterprise AI tooling strategy; owned end-to-end delivery on Windows/IIS.

City of Memphis - Facility Condition Assessment (FCA) Reporting System

- Built a full-stack automated reporting system integrating ArcGIS Enterprise, Django REST APIs, and ReportLab, replacing a manual GP-tool workflow with a self-service web platform generating 7 city-standard PDF report types.
- Engineered an in-memory caching layer (10-min TTL) with pandas-side filtering, cutting report generation from 30+ seconds to under 5; implemented dynamic filters, role-based data visibility, and user-controlled sort orders.
- Embedded a CSP-compliant Experience Builder widget (vanilla JS over HTTPS) and URL deep-links so executives generate and download facility reports directly from ArcGIS map popups, including photo attachments.

Allworld Project Management - GIS Trainee (Python Development & Automation)

Jul 2024 – Jul 2025

- Developed Python/ArcPy automation for recurring GIS data processing, QA/QC validation, reporting, and service publishing across enterprise geodatabases; built and maintained web maps, dashboards, and GIS applications.
- Supported enterprise system security, user access permissions, and helpdesk operations — troubleshooting issues and documenting workflows for GIS and non-GIS users.

Surface Water Institute, Christian Brothers University - Research Assistant

Nov 2023 – May 2025

- Processed and analyzed hydrological and environmental datasets with Python and GIS to support water-resource research and municipal drainage studies; standardized technical manuals and reports in LaTeX.

INDEPENDENT PROJECTS

HookFlow - Full-Stack ArcGIS Automation SaaS Platform (Solo Engineer)

[Live in production](#)

Django 5, Python 3.13, SQL Server (Azure), IIS on Windows Server, Stripe, ArcGIS Enterprise + AGOL

- Built and launched a production multi-tenant SaaS connecting Survey123 submissions to automated PDF generation, email delivery, and downstream webhook routing — a domain-specific alternative to Make.com/Zapier for GIS teams.
- Architected an event-driven backend: webhook receiver with signature verification, idempotent event dispatch, scheduler service for cron-based scenarios, and field-level encryption of portal credentials.
- Implemented OAuth 2.0 integration for ArcGIS Online and Enterprise with token refresh and credential rotation; reverse-engineered Survey123's webhook payload to extract per-request portal tokens, cutting Enterprise customer onboarding from admin OAuth app registration to zero-config.
- Shipped production launch end to end: HTTPS custom domain with CSP and HSTS, Stripe subscription billing across three tiers with webhook-driven entitlements, SSO via Google/Microsoft/GitHub, Sentry monitoring, and structured logging.
- Designed the product surface: wizard-based scenario builder (trigger → fetch → transform → export → deliver), real-time execution dashboard with retry visibility, auto-registered webhook endpoints, and per-workspace limits with invitations.

EDUCATION

Christian Brothers University - M.S. Computer Information Systems (GPA 4.00)

Aug 2023 – May 2025

Coursework: Software Programming, Big Data Management, Natural Language Processing, Data Science, Data Visualization, Technical Project Management, Operations Research

CERTIFICATIONS

Microsoft Certified: Azure Database Administrator Associate (2026) • Microsoft Certified: Power BI Data Analyst Associate (2025) • ArcGIS Pro Foundational (2025) • AWS Cloud Practitioner Course (2022) • MTA: Introduction to Programming Using Python (2022)