TYLER YOUK

(719) 205-9983 | dev@tyleryouk.com | linkedin.com/in/tyler-youk | github.com/kxagent | docs.utopiamodels.ai

PROFESSIONAL SUMMARY

Software engineer who builds reliable, observable backend and infrastructure systems in Python, PostgreSQL and Linux. At Kratos Defense & Security, builds schema validation and Prometheus health monitoring for satellite ground systems and deploys to production weekly. Outside work, built and runs a self-hosted platform of autonomous AI coding agents, managed as infrastructure as code.

PROFESSIONAL EXPERIENCE

Kratos Defense & Security **June 2026 - Present**

Software Engineer, Satellite Collection-Tasking

- Diagnosed why a multi-service satellite-tasking pipeline left every detected signal unclassified, traced it to a correlation key dropped across a service boundary, and wrote the identifier contract between the services.
- Built PostgreSQL schema drift validation that checks the live catalog's constraints and foreign keys against the DDL and SQLModel ORM models, catching foreign-key defects that a column-only check missed.
- Debugged a blocked OAuth 2.0 service-to-service integration with controlled token requests, proving its identity could validate tokens but not issue them, and handed the fix to the owning team.

Kratos Defense & Security **June 2025 - May 2026**

Software Engineer, Ground-Station Observability

- Backtested an aggregate database health check against retained Prometheus production metrics, found it reported healthy through every real outage, and re-architected it so outages now register as failures in production.
- Built, as sole engineer, the operator alerting application for a 24/7 network operations center: an Angular and TypeScript UI, FastAPI REST and WebSocket APIs, and PostgreSQL-backed alert state.
- Redesigned Prometheus health metrics so labels carry host identity and sample values carry state, eliminating contradictory time series that had masked failures across most production hosts.

PROJECTS & OUTSIDE EXPERIENCE

Autonomous Engineering Fleet: Self-Hosted Coding-Agent Platform

- Built a self-hosted platform where Claude Code agents, each running as its own Linux user, turn GitHub issues into merged pull requests; in a self-healing loop, a failed systemd service opens its own issue and is remediated in a median 8 minutes.
- Codified it as infrastructure as code: Ansible roles with Molecule tests and ansible-lint in CI, drift convergence, OpenTofu for DNS and network ACLs, CIS-hardened Ubuntu, and Prometheus, Grafana and Alertmanager SLO alerts.

Scout: Autonomous Job-Search Agent

- Built an always-on Python polling service that sweeps nearly 10,000 company job boards through their public ATS APIs in about 3 minutes, with per-host rate limiting and retries, so new postings surface within one sweep.
- Implemented an LLM job-fit classifier (Claude with JSON-schema structured output plus deterministic rules) and Playwright browser automation that completes and submits applications, earning interviews at Anduril, Apex and Usul.

RAW Phone: Android SMS Gateway

- Built a Java Android device-owner app that turns a personal phone into an SMS gateway for AI agents, capturing texts, calls and notifications and sending them to a Node.js REST API over a private Tailscale network.
- Designed the send path as a pull-based outbox: the phone polls the server, sends through SmsManager and acknowledges each send result, behind Bearer-token auth, a recipient allow-list, rate limits and a heartbeat alert.

EDUCATION

George Mason University, *Bachelor of Science (BS), Computer Science, GPA: 3.74*

SKILLS

Skills: Python, SQL, TypeScript, Node.js, Java, Bash, FastAPI, PostgreSQL, SQLAlchemy, SQLModel, WebSockets, GraphQL, Angular, Android, LLM agents, Claude Code, Playwright, Kubernetes, Helm, Docker, Ansible, OpenTofu, GitHub Actions, CI/CD, AWS GovCloud, GCP, Linux, systemd, Tailscale, Prometheus, PromQL, Grafana, Alertmanager, Distributed systems, Reliability engineering, Observability, Schema design, Data modeling