Jeffrey Plewak

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Professional Summary

Software developer creating and leading platforms across AI/ML, Full stack Python, Java, Go, Embedded programming, full stack, multi-agent orchestration, retrieval, and blockchain-based governance and tokenization. Proven record of translating vision and ideas into real systems. SOA microservices, event-driven architectures and object oriented programming.

Core Skills:

AI & Machine Learning
- Python, FastAPI, Flask, LLM integration and orchestration: LangChain, LangGraph, Ollama, AWS Bedrock, vLLM. Fine tuning llms.
- NLP: BERT, OCR, text classification, RAG pipelines
- Multi-agent systems, explainable AI (XAI), model observability (SHAP, LIME)
- Hugging Face, GPT family, model evaluation

Backend & APIs
- Python (FastAPI, Flask, Django), Node.js (REST, gRPC), .NET (C#), Java, C/C++, Golang
- Messaging/queues/Scheduling: Kafka, RabbitMQ, Celery, Redis, APScheduler

Frontend
- React.js, Next.js, Angular, Vue.js, Typescript/JavaScript, HTML/CSS

Cloud, DevOps & Infrastructure
- AWS (EKS, EC2, S3, Lambda, RDS, DynamoDB, EventBridge, IAM, Keystore)
- Kubernetes, Docker, Helm, Terraform, Docker Compose
- CI/CD: GitHub Actions, Jenkins, Travis
- Observability: OpenTelemetry, Prometheus, Grafana, ELK, Loki, Splunk, Jaeger

Compliance & Security
- SBOM/SCA: Syft, SPDX, CycloneDX
- SLSA, provenance & artifact signing, Sigstore/cosign
- Policy-as-code: OPA, Keycloak, Casbin, JWT/RBAC/SSO
- Static analysis: Parasoft, LDRA, SCA
- Safety certifications: DO-178

Testing & Quality
- Unit and integration: PyTest, unittest, JUnit, nose2
- UI and automation: Playwright, Cypress, Selenium
- Coverage, profiling, and instrumentation, penetration, performance, telemetry.

Professional Experience

MSTRO.ai - Python full stack developer (Remote)   09-2024 - Present.

- Led design and delivery of Python compliant AI platforms combining multi-agent LLM systems, provenance/lineage, and blockchain governance for SMB innovation.
- Designed and deployed Python microservices with FastAPI, Flask, Kafka, Redis, PostgreSQL, Docker, Kubernetes, NGINX, and GitHub Actions, using SOA/EDA patterns to integrate LLMs like Ollama and OpenAI behind scalable, event-driven APIs.
- Built multi-agent LLM systems using LangGraph, LangChain,Pydantic, pytest, mypy, oTel, Prometheus, Grafana, and Schema Registry (Kafka), focusing on deterministic prompts, strict schemas, and performance-aware orchestration in production.

- Applied OPA gates redaction and best practices in HIPAA, FDA, SOC2, and GDPR alignment with human-in-the-loop DAO approvals and policy gates. JWT, KeyCloak. Supabase.
- Designed a GitHub-like knowledge marketplace prototype for versioning Intellectual property.
- Engineered smart contracts, Identity management automation and integration solutions pushing into web3
- Developed GitHub Actions, CI/CD automations. Design Pipelines.
- Talent acquisition, Interviewing, staffing, and mentoring.
- Product strategy/ leadership (Head of R&D Innovation over several engineers) hiring and planning growing to 20.

MyGeo LLC - Python Developer - **Member/Owner (Remote)**.   02/2024 – 09/2024

- Led product vision and execution for a cloud-based SEO/communications platform; seamless integrations between AI and APIs, microservices. Mongo React, Erlang, Python, Javascript.
- Built a provenance-first AI platform: automated SPDX/CycloneDX SBOMs, SLSA build attestations, Sigstore/cosign signing, and RBAC (Casbin) for multi-tenant deployments. Compose, k8s, argo, WASM, FastAPI, React, Ollama, BERT, OCR. Multisector dynamic provenance and observability conduit platform. Multi-agent orchestration in a compliant harness.
- Next/React 15/18 Typescript, JSX, Node, Python, Make, Integrations with LLM, local ETL SSOT dynamic portfolio including timeline and ontology. Interactive portfolio, Airtable integrations, Make.com
- Provenance, Compliance EU, FDA, NIST, SLSA requirements, attestation gates and ledgers.
- ML/OPs, Ollama, Langgraph, Langchain, Prompt engineering LLM fine tuning infrastructure routing and orchestrations.

J.P. Morgan Chase - (Senior associate III) (Remote/Dallas, TX)   07/2022 - 12/2023

- Built cloud native automation tools (Python, React, Flask, AWS Lambda, S3, IAM, boto3, Terraform
- Architected software from development to production to seamlessly integrate into AWS, EKS, GCP mappings of services
- Reduced deployment times by verifying staging, integration, prod environment firewall ports, firewalls, domains via an API and UI/UX. Firewall visualization search and navigation. CLI/API/UI usability throughout org (internal) automation efforts from multiple teams and creating common ground in platform and cloud engineering.
- Production SRE for Global Banking prod changes for promoting environments in AWS, EKS.
- Ran Agile ceremonies, backlog refinement, and sprint planning; mentored engineers and aligned delivery with product goals. Promoting and debugging, enhancing automation build pipeline jenkins/travis
- Innovated and led projects of small teams to success, joining efforts from multiple departments (Global Banking Asset Wealth mgmt

W2 Consulting (Nintendo) — Senior Consultant   09/2019 - 03/2022

- Led modernization and migration programs, cutting migration costs by nearly $8M. Created software pipeline to safely migrate ~4000 apps from deployment out of the old and into new deployment environments.
- Certified flight-critical software; built Python microservices; automated DevSecOps.
- ETL pipelines, python, C++, java development..
- Automate builds, pipelines, Documentation generation.
- Java, Python, SQL, AWS, Terraform, React.
- Developed in IAM, SQS, SNS, boto3, lambda, cloudwatch, VLAN, ElasticIP, S3, EC2, RDS, VPC, CloudFront.

IBM Cloud — Senior Software Engineer (Austin, TX)   01/2019 - 09/2019

- Designed and deployed Kubernetes microservices (Python/Golang) with high availability; maintained strict SLA and SLO.
- Engineered and observed CI/CD and SRE incident responses and metrics engineering.
- Designed and deployed Kubernetes microservices in Python and Golang, ensuring high availability and adherence to strict SLAs and SLO.
- Owned CI/CD pipelines and led SRE incident response initiatives.
- Implemented monitoring and reliability practices reducing debug and uptime.
- K8s Kubernetes, Helm, build variant improvements, automations.
- Github bots automations internal team management.

- Root cause analysis for prod IBM Cloud. Isolation and management of critical triage.

Lockheed Martin - Senior Software Engineer (Fort Worth, TX)   01-2018 - 12-2019

- Developed real-time sw for F-35 Joint Strike fighter Jet using C++, ensuring critical safety compliance with software safety certifications. Full end-to-end Requirements high-low, traceability, software modification, and creation. SEAL 1-3 Certification SBOM bundle artifacts. DO 178
- Innovations with automation in building pipelines, parallelization, instrumentation, and testing.
- Outward reaching out to vendors for new software tooling evaluation into the software acceptance internal pipelines. Fully automated and facelift for internal developer motivation and integration with new approved tooling modernization.
- Automated integration pipelines, reducing release cycles by weeks and improving delivery efficiency
- Augmented/Built new architecture pipelines, parallelization and short circuit self healing builds. In polygots.
- Created lab memory map algorithms to capture automated test coverage; ensured traceability, HITL (Human in the Loop) sign-off approvals, and waiver management. Parasoft, LDRA, Python, Perl, C++, CPython.
- Conducted static code analysis and mapped DO-178 branch statements/objects to SBOM artifacts for compliance and provenance tracking.100% statement, branch line coverage.

Fidelity Investments - Senior Python Engineer (Westlake, TX)   04-2015 - 12-2017

- Engineered Django backends with robust rollback and profiling; improved application reliability.
- Agile ceremonies, assessments and mentoring.
- Refactoring monolithic applications into microservices, SOLID/DRY.
- Improved build process automation, development workflows, and overall SDLC.

Lockheed Martin - Software Engineer (Syracuse, NY)   06-2012 - 04-2015

- Automated avionics simulations in compliance with DO-178 standards.
- Built custom tooling that reduced certification effort from 5 engineers to 2.
- Developed solutions using Java, REST APIs, and C++.
- Led Jira migration to streamline project tracking and collaboration.

BAE Systems - Software Engineer Associate (St. Inigoes, MD)   05-2011 - 06-2012

- Developed multithreaded radar simulations using C++ and Java.
- Supported the full lifecycle of R&D for Navy IFF radar systems.
- Contributed from design through baseline development.

Personal Projects:

Solarprompt - Full stack compliance platform written in Python, React/Typescript, Docker, docker compose, k3, MAS configuration. Compliance sbom, otel. Tracks all model interaction local or remote with traceability and deterministic input outputs. Solves compliance issues for audit with using AI in applications.
Perplexity Insights - React, python, TSX and integration with perplexity LLM to query using headless browser scrape tags and chain prompt into finding deeper ai insights for customers websites SEO improvements. Python Flask server and microservices.
Repository grader - ETL pipeline traverses over repository grading the maturity before migrating into other environments. Python full stack.

Education
B.S., Computer Science — University at Buffalo (SUNY), 2011, Buffalo, NY, USA   3.4 GPA