# Dalton Payne

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## Summary

AI engineer building **production agent systems for regulated industrial domains** — nearly two years shipping AI agents across Drilling, Completions, and Safety at Devon Energy, now Member of Technical Staff at Collide building the agent layer of an industrial AI platform.

## Experience

### Collide — Member of Technical Staff (Remote)

January 2026 – Present

- Shipped the platform's **subagent pattern** — declarative templates discovered via Python entry points with a transactional instantiation service — and built primitive subagents on it over tools authored by domain experts.
- Owned an end-to-end domain workflow integration: ported a standalone public-regulatory-data app into the platform across five services with a coordinated schema migration and agent-tool registration. Set the pattern for subsequent workflows.
- Extended document ingestion to industrial formats (**LAS well logs**, Outlook .msg, .pptx) and replaced direct cloud-storage URLs with an authenticated streaming proxy across three services, closing a token-leak risk.
- Built and maintained curated evaluation datasets across multiple production agents using LangSmith; ran iteration cycles surfacing drift between model and prompt changes.

### Devon Energy — Oklahoma City, OK

June 2022 – January 2026 (3 yrs 8 mos)

**AI Engineer** (June 2024 – January 2026)

- Lead engineer for production AI agents serving **Drilling, Completions, and Safety** in a regulated, high-consequence environment — RAG knowledge-base plugin + tool-calling against Snowflake, with versioned prompts and curated eval datasets.
- Presented **"Leveraging AI Agents to Navigate Safety Data"** at the **2025 UTA Oil & Gas Conference**.
- Designed a **multi-agent NL-to-SQL workflow** — 6 task-specialized agents with task-tuned temperatures, ported from n8n to Python (pydantic-ai) for reuse.
- Built a production ETL + analytics dashboard for foreman field audits on Snowflake, Databricks, Azure OpenAI (gpt-4o), and Dash Enterprise — incremental processing with threshold gating and LLM caching.
- Authored a shared agent template + prompt-generator adopted across D&C agents; mentored an intern and taught a recurring "Teacher Thursday" session for engineers and leadership.

**Data Science Intern** (August 2022 – May 2024)

- Built data pipelines and ML models on Databricks against **Snowflake and OSIsoft PI**, including a predictive maintenance model for an artificial lift system, scoped with petroleum and operations SMEs.

## Selected Projects

**kalashnikov.ai** — Founder & Sole Engineer (2026 – Present)

- AI reference platform with an autonomous extraction pipeline producing passage-level citations; full ownership on Cloudflare D1, Workers, and R2.

## Technical Skills

- **Agent engineering:** LangChain ecosystem, tool-calling, RAG, subagent patterns, eval datasets and iteration loops, MCP, prompt versioning
- **Data systems:** Snowflake, Databricks, Alation, OSIsoft PI
- **Languages & frameworks:** Python (FastAPI, pydantic-ai, pandas, scikit-learn), SQL, TypeScript
- **Cloud / Infra:** Azure (OpenAI, Functions, APIM), Cloudflare, Docker
- **Certifications:** FAA Part 107 Commercial Drone Pilot (2024)

## Education

**B.S. Data Science**, University of Central Oklahoma — May 2024 (GPA 3.68)

## Awards

- **Leonard-Murray Statistics Endowed Award** (2023) and **John Taylor Beresford Endowed Scholarship for Computer Science** (2022) — UCO's largest STEM scholarship awards.