Dmytro Kovalchuk

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Summary

8 years building AI platforms — from infrastructure and API architecture to multi-agent orchestration at enterprise scale. At Parcha, built the entire platform from scratch as founding engineer: multi-tenant Kubernetes infrastructure, agent orchestration APIs, evaluation pipelines, and security controls for compliance certification. Led technical decisions and worked directly with enterprise clients on integration and rollout. I led implementation of Grep.ai — which beat current SOTA on DeepResearch Bench — owning agent orchestration, prompt and skill design, evals, and infrastructure across 250+ skills and 16 industries on Claude.

Skills

- **Infrastructure**: Kubernetes, Docker, Terraform, GCP, AWS, Prometheus, Grafana, GitHub Actions, secret management
- **Platform & APIs**: Multi-tenant architecture, API design, workflow orchestration, rate limiting, state management, CI/CD
- **Backend**: Python (async), REST APIs, gRPC, FastAPI, PostgreSQL, BigQuery, Redis, Celery
- **AI/Agents**: Multi-agent orchestration, MCP tools, Claude/Anthropic Agent SDK, RAG, FAISS, pgvector
- **Security & Compliance**: Access management, audit logging, isolation controls

Experience

Parcha — Founding AI Engineer

Sep 2023 – Present | San Francisco, CA

First engineering hire. Technical #2 behind CTO. Built the AI platform from zero to production serving enterprise clients.

Agent Orchestration & API Architecture

- Core architect of **Grep.ai** — beat current SOTA on DeepResearch Bench (54.37 score) on PhD-level research tasks
- Designed multi-agent orchestration with configurable depth modes: ULTRA-FAST (Cerebras + parallel search, ~10s), DEEP (Claude with expanded tooling), ULTRA-DEEP (spawns sub-agents for parallel map-reduce research)
- Built 100+ MCP tool integrations wrapping internal APIs and external data sources (OpenCorporates, sanctions lists, SEC, courts across 200+ jurisdictions)
- Designed 250+ agent skills across 16 industries with fail-safe execution and graceful degradation

Infrastructure & Platform

- Replaced external DevOps consultant; own full infrastructure stack: Terraform, GCP, Kubernetes, secret management, CI/CD pipelines
- Designed multi-tenant architecture serving concurrent enterprise clients with isolated workloads and per-tenant configuration
- Built rate-aware control plane for million-record migrations — balances K8s pod scaling against LLM API rate limits (RPM/TPM) with automatic backpressure
- Implemented Prometheus/Grafana observability stack; dashboards for latency percentiles, error rates, and resource utilization across all services
- Implemented security controls for compliance certification — access management, audit logging, isolation controls

Evaluation & Developer Experience

- Built "Capture First, Measure Later" telemetry pipeline for production model monitoring; integrated Braintrust and Scorecard for trace-based evals and LLM-as-judge monitoring
- Identified false negatives during enterprise pilot; validated fix on 100 prod cases, then productized into self-service evaluation UI for compliance teams
- Early Claude Code adopter (Feb 2025 research preview); developed plan-then-execute workflow, converted entire team from Cursor through organic adoption

Client-Facing & Leadership

- Joined CEO on enterprise sales calls to explain AI architecture, model governance, and reliability
- Supported client compliance teams through integration rollouts, post-go-live tuning, and ongoing case reviews
- Early access participant across Anthropic programs (Flannel EAP, Sessions API EAP, Agent SDK tracing); provided direct product feedback

Carvana — Team Lead, Machine Learning

Mar 2022 – Aug 2023 | Remote

Led 4-person ML team. Early LLM adopter pre-GPT-4.

- Led cross-functional initiative to deploy LLMs into production — document understanding, knowledge base Q&A, customer-facing chatbot with fine-tuned models
- Built gRPC inference services for chatbot; designed message processing pipeline in Scala
- Custom fine-tuning of LayoutLM family of models for document processing at scale
- Promoted from Sr. ML Engineer to Team Lead within first year

Augment CXM — Senior Machine Learning Engineer

Aug 2017 – Jun 2022 | San Francisco, CA

Core ML team building conversational AI platform.

- Established Airflow as primary MLOps platform for model training and deployment pipelines
- Deployed FAISS vector database for semantic search over millions of conversational records
- Developed patented LSTM model for next utterance prediction — core product IP
- Shipped production NLP models: topic analysis, clustering, sentiment, NER

Previously: Core Algorithms and Data Science (Aug 2017 – Aug 2019)

Earlier Experience

- **Cornerstone OnDemand** — CSM/Business Analyst (2014–2017)
- **The Pep Boys** — System Analyst / Online Training Developer (2005–2013)

Education

- **Galvanize** — Data Science Immersive
- **Lakeland College, WI** — Computer Science, Economics
- **ICU University, Kyiv** — Management of Information Systems