

DENIS VOLOKH

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SENIOR FULL STACK SOFTWARE ENGINEER • FRONT & BACKEND APPLICATIONS • AGENTIC SOFTWARE ENGINEERING

Senior Full Stack Engineer with 15+ years of experience designing, building, and operating production-grade API-driven backend systems, service-oriented platforms, SaaS products and data platforms. Deep expertise in service development and performance-critical backend architectures.

Experienced in building **AI-assisted and agentic workflows** for document extraction, classification, validation, RAG-based retrieval, LLM context optimization, execution monitoring, and human-in-the-loop review. Proven track record delivering scalable, secure systems in regulated and data-sensitive environments, including fintech, energy analytics, and AI-driven platforms.

**Product Architecture • Software Engineering • CI/CD • Software Development Lifecycle
Code Reviews • Microservices • Prototyping • Data Science & Pipelines • Machine Learning • APIs**

Programming: Python, Go, TypeScript | **Tools:** Airflow, Prefect, RabbitMQ | **Frameworks:** FastAPI, Django, Express, React/React Native | **Cloud:** AWS, Google Cloud | **Automation:** GitHub Actions, Kubernetes, Docker

CAREER HISTORY

FULL STACK SOFTWARE ENGINEER | Jotson, Canada, Alberta, Calgary

2024 -

- Designed and implemented **Python and TypeScript backend services** powering a production energy-analytics platform.
- Developed and operated **AI/LLM-assisted document-processing workflows** for utility bills, OCR extraction, validation, and structured data generation.
- Created **agentic development workflows** for extraction, validation, and correction tasks, including prompt iteration, execution monitoring, and human-in-the-loop review.
- Optimized **LLM-based OCR and document-extraction pipelines**, achieving **15× faster PDF parsing**.
- Optimized LLM context design** for document extraction workflows, improving prompt reliability, reducing irrelevant context, and increasing consistency of structured outputs.
- Improved **CI/CD pipelines** (Docker, GitHub Actions, AWS/GCP), increasing build stability and deployment confidence.
- Introduced structured workflows for **technical triage, system health, and backend ownership**.

SENIOR BACKEND ENGINEER & CTO | Noviscent Pte Ltd., Singapore

2018 - 2024

- Led backend architecture for a **multi-tenant financial analytics platform** serving institutional clients.
- Designed and maintained **high-throughput REST** using Python, Django, and FastAPI.
- Developed event-driven **ETL pipelines** using Amazon SQS for scalable and fault-tolerant data ingestion.
- Built AI-assisted research and knowledge workflows, including **RAG-based** systems, Slack-integrated assistants, and document intelligence tooling.
- Introduced an **agentic approach** for fund operations document classification, routing, and retrieval, reducing manual search and operational review work by **80%**.
- Optimized retrieval and LLM context construction for **RAG-based** financial document analysis, improving result relevance, reducing irrelevant context, and increasing the reliability of AI-assisted research workflows.
- Reviewed AI-assisted development outputs, prompt behavior, backend implementation plans, and generated code before production adoption.
- Developed **event-driven ETL pipelines** using RabbitMQ, SQS, and Airflow for scalable data ingestion.
- Worked in a globally distributed agile environment, collaborating across engineering, data science, and operations.

SENIOR MANAGER, SYSTEMS & TECHNOLOGY | globalORE Pte Ltd., Singapore**2017 - 2018**

- Led engineering team building a real-time commodity exchange platform.
- Designed microservice-based trading engine with event-driven workflows; reduced IT costs **35%**.
- Automated analytics and reporting pipelines using Python and PostgreSQL/Elasticsearch.

SOFTWARE & DEVOPS ENGINEER | Vulpes Investment Management Pte, Singapore**2013 - 2017**

- Built **in-house trading systems** integrating multiple brokers via FIX / REST APIs.
- Automated deployment and onboarding pipelines using **Docker + AWS CI/CD**, reducing setup time 3 days.
- Unified 4 broker data feeds into a single **GraphQL/REST layer** for systematic strategies.

SENIOR FULL STACK DEVELOPER | GreenWave REALITY, Singapore**2010 - 2013**

- Delivered backend for **IoT and smart-home platform** (precursor to PropTech analytics).
- Migrated PHP monolith to **Python microservices**, improving performance **75%**.
- Implemented **real-time sensor data streaming** and visualization dashboards in React-style SPA.

SENIOR DEVELOPER | Singapore Telecommunications Ltd., Singapore**2007 - 2010**

- Created **mobile application framework** supporting large-scale content delivery for iPhone 3GS launch.
- Improved test coverage and delivery automation by **80%** through internal CI/CD pipelines.

SOFTWARE DEVELOPMENT ENGINEER | Celenia, Ukraine**2005 - 2007**

- Solved MS Dynamics NAV technical issues across sales, finance management, manufacturing, warehousing, and more.

MENTORING**MENTOR & CODE REVIEWER** | Yandex Practicum, Remote**2021 - 2022**

- Mentored and reviewed code for 50+ students in Python and Django; developed and structured two courses.

EDUCATION & CERTIFICATIONS**Cloud Practitioner Certificate** | Amazon (2024)**Reinforcement Learning Fundamentals** | Coursera (2024)**IBM Data Analyst Professional Certificate** (2024)**Microsoft Azure AI Fundamentals Professional Certificate** (2024)**Data Analysis with Python Certificate** (2024)**Master of Science in Computer Science (Honors)** | Kremenchuk State Polytechnical University