

Vanja Smailovic - Portfolio



Lead AI Engineer and Applied AI Consultant

Services

I help product and engineering teams turn ambiguous AI opportunities into shipped product capabilities:

- LLM agents and AI assistants
- Document extraction, structured outputs and RAG
- Machine learning
- Text-to-SQL and analytics agents
- Anomaly detection and monitoring products
- Applied AI prototyping and MVP delivery
- AI product discovery, evaluation and technical roadmap



Case Studies



1. CEO Inbox Classification & Automation

Problem	CEO office needed a reliable way to prioritize a high-volume inbox without missing important messages.
Built	Multi-agent inbox system that classified messages, applied Gmail labels and rescued important emails from automated filters.
Tech	Python, Google ADK, Gemini, Claude, Vertex AI Agent Runtime, Marimo, LiteLLM, Pydantic.

Outcome	Active initial rollout in ~6 weeks, estimated 2.5 hours saved per week in executive email reading time.
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2. CEO-facing AI Executive Assistant

Problem	CEO office faced high-volume, high-context information workflows across email, calendar, Slack and news.
Built	Interactive multi-agent assistant for real-time chat, daily briefings and source-grounded summaries across email, calendar and Slack.
Tech	Python, Google ADK, Gemini, Claude, Vertex AI, FastAPI, MCP, Pydantic, Datadog, Google and Slack APIs.

Outcome	Demonstrated potential to save time gathering information, assembling context and switching between workplace tools.
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3. AI Invoice PDF Parser

Problem	Monthly invoice extraction was manual, slow and error-prone.
Built	Live, in-house parser converting invoice PDFs into validated structured data.
Tech	Python, OpenAI Structured Outputs, multimodal GPT-4.1, OCR, PyMuPDF, Pydantic.

Outcome	Reduced one FTE day of manual work to ~20 minutes, a 24x reduction, with ~99% typical accuracy.
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4. Text-to-SQL AI Payments Analytics Agent

Problem Customers needed self-serve payments analytics without SQL or domain knowledge.

Built Customer-facing analytics agent translating natural language into grounded payments queries.

Tech Python, GPT-4o, Chainlit, tool calling, schema grounding, SQL, FAISS, light RAG over company documentation.

Outcome Enabled live natural-language access to expert-level payments insights and reduced reliance on manual analytics workflows.



5. Payments Anomaly Detection Product

Problem	Merchants needed monitoring and alerting for unusual payments behavior.
Built	Customer-facing anomaly detection product for merchant payments monitoring and alerts.
Tech	Python, SQL, Meta Prophet, Redshift, Cube.js, payments data transformation, querying optimization, anomaly detection, machine learning.

Outcome	Became the company's second most important product area, adopted by approximately 20 active B2B customers.
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6. Credit Default Risk Modeling

Problem Credit providers needed stronger risk assessment from raw bank transaction data.

Built Credit risk capabilities using transaction tagging, NLP classification and binary default modeling.

Tech Python, SQL, bank transaction data, XGBoost, BoostARoota, SHAP, AWS, Google Cloud.

Outcome Supported revenue-generating credit products with more than 5 million credit decisions every year across 150 live customers and 13 markets, and supported technical delivery for a major customer acquisition.



7. Manufacturing Cost-Savings Regression Model

Problem	Inconsistent layer thickness affected quality in tungsten-carbide metal-cutting insert production.
Built	Regression analysis identifying key predictors of layer thickness from furnace sensor signals.
Tech	Python, pandas, regression modeling, statistical analysis, 50+ sensor signals, manufacturing process data.

Outcome	Supported quality-control improvements and identified estimated savings of €800k+.
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8. Manufacturing Sales-Prioritization Map

Problem	Sales teams needed prioritized US machine-shop prospects for targeted outreach.
Built	Interactive geospatial map categorizing prospects by estimated commercial potential.
Tech	Python, web scraping, data cleaning, business prioritization logic, geospatial visualization.
Outcome	Helped sales teams navigate prospects geographically and focus outreach on higher-potential opportunities.



9. Bank Transaction Anonymization Pipeline

Problem Strict regulatory requirements prevented data teams from accessing bank transaction data essential to daily analysis and product development.

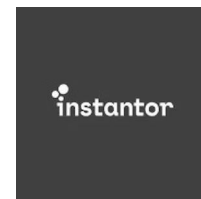
Built Compliance-approved anonymization pipeline preserving the analytical value of transaction data for safe, organization-wide use.

Tech Python, SQL, Apache Airflow, AWS Athena, Amazon S3, AWS Glue, PySpark, pandas, Google Cloud Storage, Google BigQuery.

Outcome Unlocked organization-wide access to previously inaccessible transaction data, creating a continuously growing resource for analysis and product innovation.



Clients



Leadership



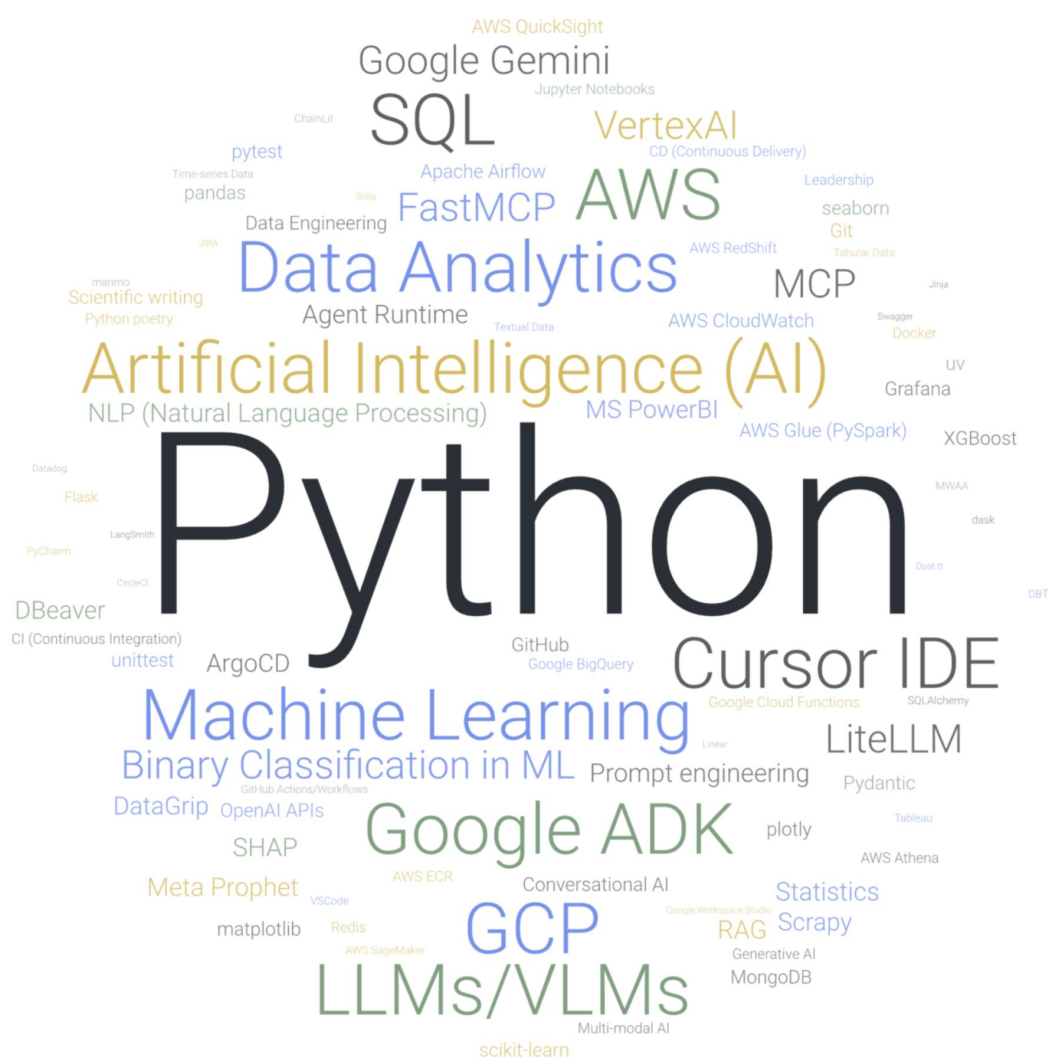
Technical Leadership

- Led applied AI, ML and data science delivery across fintech, payments, manufacturing and private equity, from discovery to shipped products.
- Turned ambiguous business problems into scoped technical plans, prototypes and shipped product capabilities.
- Balanced technical quality, delivery speed and business value across startup, scale-up and enterprise environments.
- Worked in successfully exited startups and scale-ups with a proven track record of business impact.

People Leadership

- Engineering management experience spanning 2+ years, including hiring, compensation, promotions and underperformance management.
- Led an AI/ML team of 4, hiring, onboarding and coaching senior, mid-level and junior data scientists.
- Worked closely with founders, senior leaders and customers, including CEO, CTO, Chief of Staff, CPO and VP-level stakeholders.
- Built ways of working that improved execution, ownership and growth, setting teams up for success.

Technologies



Contact

Vanja Smailovic

Stockholm, Sweden

vanja.smailovic@gmail.com

www.vanjasmailovic.com

