Timofei Ryko

AI Engineer

timofei.ryko@gmail.com • linkedin.com/in/timofeiryko • t.me/ryko_official

AI engineer with a biomedical research background. Four years building data-driven AI products end-to-end — from discovery, PRD and customer development to shipping production ML/LLM systems. Led cross-functional teams of 5–10; founder-level 0→1 experience across health-tech, wellness and fintech-adjacent products. Built production LLM agents with hybrid-search RAG, tool calling and long-term memory.

EXPERIENCE

Founder, *Limpopo AI* OWN STARTUP limpopoai.ru Feb 2026 – Sep 2026

- Sole founder building a veterinary AI assistant (Telegram bot + clinic dashboard) end-to-end — product, UX and full-stack engineering, AI-assisted with Claude Code + Codex; running customer development and RAG-quality validation directly with veterinarians.
- Shipped a production **agent harness** — intent routing, hybrid-search RAG, tool calling, PII anonymization, **parallel workflows** — with a retrieval-benchmarking study to select the stack; building computer-vision models for veterinary imaging (X-ray, ultrasound, CT).

  Stack: Python, Django, Next.js, aiogram, LangChain/LangGraph, pgvector, Redis, PyTorch, GLM-5.2, Gemini, Deepgram.

AI Engineer, *Agapella (live practice & wellness platform)* Feb 2026 – Jun 2026

- Owned all AI on a live wellness/meditation platform (React Native app, .NET backend): built a context-aware, proactive in-app LLM assistant fully integrated with user and app context, with long-term memory (RAG, Qdrant, Mem0) and prompt caching optimized for latency and cost.
- Set up AI content moderation and live-stream transcription, and owned the platform's broader AI capabilities.

  Stack: Python, PydanticAI, Litestar, .NET, React Native, Expo, PostgreSQL, Redis, MinIO/S3, GetStream Chat SDK, LangChain/LangGraph, Langflow, Qdrant, OpenAI, Whisper.

Co-founder & CTO, *Niki Wellness* OWN STARTUP Sep 2024 – Nov 2025

- Cofounded a health-tech startup — an AI nutrition assistant for the B2C market; owned product and engineering, and led the technical team, prompt engineering and agentic workflow.
- Launched an MVP in Telegram: **50+ paying users in the first month**, with **92% of users experiencing improved health outcomes** (self-reported).

  Stack: Python, aiogram, OpenAI.

Product Owner & Product Manager, *Hawex Group LTD* Oct 2022 – Jul 2024

- **Cut customer acquisition cost (CAC) by 35% in 3 months** by architecting an AI content-generation system with custom prompts and a domain-specific vector database.
- Led an internal 0→1 AI startup (a two-sided marketplace for biotech talent); directed a cross-functional team and ran B2B Customer Development for the parent company's fintech product (international payments).

Machine Learning Engineer, *University of Tartu, iCV Lab* Jan 2022 – Oct 2022

- Delivered several industrial and research computer-vision projects on contract for startup clients.
- Lead project: a deep-learning system estimating **blood-oxygen saturation (SpO_2) and pulse from smartphone facial video** — contactless, wearable-adjacent sensing that turns a phone camera into a clinical-grade health sensor.

  Stack: Python, PyTorch, TensorFlow, OpenCV, pandas, NumPy, Matplotlib, seaborn.

PUBLICATIONS & RESEARCH POSTERS

- **Ryko, T.** (first author), Timoshin, A., et al. “Comparative Evaluation of Soft Tissue Regeneration Rate Using Different Wound Closure Methods After Palatal Donor Site Harvesting: A Retrospective Cohort Study.” *Medicina*, 62(5), 2026. — Led data analysis on a 300-patient clinical cohort. mdpi.com/1648-9144/62/5/997
- Latypova, A., Nam, E.V., **Ryko, T.**, et al. “Parameter-Efficient Adaptation of a Pretrained Language Model via Soft Prompt Tuning Enables Hit-Enriched Conditional Cell Line-Specific Generation of Cell-Penetrating Peptides.” *ICML 2026 AI4Science Workshop* (poster). — PEFT / protein language model for conditional peptide generation. openreview.net/forum?id=It2CpBJ9Aj
- “Analysis of Human Disease with Exome Sequence Association Data.” *School of Molecular and Theoretical Biology (SMTB)* (research poster). — Bioinformatics pipeline for interpreting exome variant–trait associations using protein ligand-binding sites. Poster · github.com/timofeiryko/smtb

EDUCATION

Moscow Institute of Physics and Technology (MIPT) — BSc, Applied Mathematics for Biophysics and Bioinformatics (Phystech School of Biological & Medical Physics). 2023 – 2028

University of Tartu, Estonia — BSc, Science and Technology (full scholarship), spec. Bioengineering & Robotics (incomplete). GPA 4.78/5. 2021 – 2024

Turing College — Data Science, hands-on program (full scholarship).

AWARDS

- **Winner**, HackAging.ai — Fundamental track (aging & longevity hackathon).
  APIs & data: Sonar (Perplexity), ClinicalTrials.gov, PubMed E-utilities, ChEMBL, DILIrank. **Stack:** Python, RDKit, datamol, CatBoost, PyTorch, MoLFormer, ChemBERTa, Optuna, SHAP.
- **Silver medalist** (team), iGEM International Synthetic Biology Competition — University of Tartu.
- **Winner** (team, 1st place), Pushchino BioTournament 2023.
- **Winner**, SCAMT Bioinformatics Hackathon (ITMO University).
- **Finalist**, AIDAO AI & Data Analysis Olympiad (Yandex × HSE).
- **Prize-winner**, All-Russian School Olympiad in Biology.

OTHER ACTIVITIES

- **Advanced biology teacher** at MSU Classical Boarding School.
- **Speaker**: Tree of Life longevity conference; SciBerloga (bioinformatics & data science meetup).
- **Mentored** students for the All-Russian School Olympiad in Biology (4 years);
  taught Python data analysis to medical students.

SKILLS

Product: product discovery & delivery (0→1), PRD, JTBD, customer development, A/B testing, product metrics & cohorts, event taxonomy, roadmapping, backlog prioritization, cross-functional leadership, stakeholder communication.

AI / ML: LLM agent design & orchestration (LangChain/LangGraph, PydanticAI; control loops, parallel & multi-agent workflows), tool calling, structured outputs, RAG & hybrid search, prompt engineering, computer vision, model training & fine-tuning (BERT, LoRA/QLoRA; Hugging Face Transformers, PyTorch, TensorFlow), LLM evaluation & benchmarking, observability, knowledge distillation, long-term memory (Mem0), prompt caching, latency/cost optimization.

Technical: Python, Django, REST API design, SQL (PostgreSQL), Redis, Linux/Bash, vector databases (Qdrant, pgvector, Pinecone); vibe-coding (Claude Code, Codex).
Julia (basic), R + tidyverse (basic), Rust (basic).

Research: bioinformatics, structural biology (AlphaFold, ESM), biosignal and biomedical data analysis, mathematical and computational modeling in biology and medicine; NCBI API, ClinVar, PDB, UniProt.

Domain: health-tech, wellness, computational biology, AI in medicine and veterinary medicine, fintech (payments).

Languages: english (fluent), russian (native), german (basic), estonian (basic), spanish (basic).