Ljubomir JOSIFOVSKI

🌐 https://ljubomirj.github.io

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Summary

ML/AI researcher and engineer in industrial R&D, with background spanning speech recognition, quantitative research, trading and machine learning systems. Experience building research platforms and production systems across forecasting, optimisation, and large-scale data-driven modelling.

Now: working on train-time and test-time reasoning in LLM systems, applying ideas from structured search and hypothesis management developed in ASR lattice decoding. Interested in agentic workflows, programmatic prompting (DSPy), and building higher-level computational systems where socratic dialogue becomes an executable specification treating RLM inference as compute and context as working memory, with explicit mechanisms for branching, verification, merging, stopping, state manage incl open endedness.

Prior: quantitative researcher, trader and portfolio manager developing systematic equity and FX models including low SNR Signal extraction, fitting, forecasting, portfolio optimisation, trading & risk management.

Earlier: PhD research in robust speech recognition in noise, MSc in text-to-speech synthesis and spoken document retrieval. Background in applied mathematics, statistics, computer science, and industrial R&D.

Skills

Programming: C/C++/OpenMP, Python, SQL, duckdb, bash, awk, make, gdb/ddd, MATLAB, C#, R, Java.
Agents: Codex/Claude/Cursor/Gemini/Cline; local LLM workflows LMStudio/llama.cpp.
Tools: Vim, Git, Github, screen, VSCode, CLion, Jupyter, Spyder, Bloomberg & Reuters API-s.
Platforms: Linux (Ubuntu, CentOS), MacOS, MS-Windows, Gcloud, Slurm, HTCondor, Unix.

Experience

F9 Research, Director (2016–present; Harpenden, UK; remote distributed US, UK, EU)
Rekindled ML/AI interests with OSS llama.cpp, open weights local LLMs (GLM, Qwen, GPT-OSS), coding agents Codex, Claude, OpenCode, data agents including text2sql and more in an agentic loop.
DNNs for tabular data forecasting (c.f. Hugging Face TabArena) using TabM, TabPFN for regression.
LLM API-s for earnings calls doc2vec features extraction for for modelling and forecasting.
Quant research & development short-horizons strategies using Python, C++, cluster & cloud resources.
Managed traded a market-neutral book gross ~$350M, trade ~$35M daily, EU & US markets (MATLAB).

FutureSearch, Research Scientist (2025; remote distributed US, UK, EU)
Created then used agents to gather and organise financial data for end-user would-be products, and for internal use. Consulted on using the presumed 'alpha' 'generated' by the AI agent(s) for potential investment.

Marshall Wace, Senior Quantitative Researcher (2010–2016; London, UK)
Developed and scaled market-neutral portfolios from $100M to $10B+ over a period of 6 years.
Pioneered wrote unified R&D framework for data ingestion, signal extraction, modelling, portfolio optimization, simulation. Mentored junior researchers, implemented reproducible research workflows.

Credit Suisse, Quantitative Analyst (2007–2009; London, UK)
Independently traded equity market-neutral portfolios systematically, achieving 18% lifetime returns with Sharpe 3.1. Built and operated a complete trading platform for multi-market European equities.

G-Research (DPFMG), Quantitative Analyst (2004–2007, London, UK)
Designed and implemented systematic trading models for global equities and FX, contributed to fund profitability. Modelling, forecasting, risk management and multi-period optimization for mid- and high-frequency trading strategies. Operational portfolio management and production monitoring, on-call duty.

Canon Research Europe, Researcher (2001-2004, Bracknell, UK)
Embedded Automatic Speech Recognition, indexing, and retrieval of spoken documents with speech.

Education

Ph.D. Computer Science – University of Sheffield, UK (2000)
Thesis: Robust Speech Recognition with Missing and Unreliable Data

M.Phil. Electrical Engineering – University Sv. Kiril i Metodij, Skopje, MK (1997)
Thesis: System for text-to-speech conversion for Macedonian language

B.S. Electrical Engineering – University Sv. Kiril i Metodij, Skopje, MK (1993)