

# Ivan Evdokimov

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## Professional Summary

Machine Learning Engineer with 4+ years deploying enterprise-scale ML and GenAI solutions into production. Expert in building end-to-end MLOps pipelines with model governance, drift detection, and automated retraining on AWS. Proven track record taking models from experimentation to production, processing 100K+ sensitive datasets with 95%+ accuracy while ensuring regulatory compliance and scalable deployment.

## Experience

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| <b>Software Engineer (Machine Learning)</b> , University of Essex — Colchester, UK<br>(Remote)   | Nov 2025 — Present  |
| • Architected production-grade CI/CD pipeline for AI-powered development workflow using Lovable (AI code generation platform), GitHub Actions, and Vercel, enabling automated deployment of AI-generated codebases with 90%+ code generation rate and weekly release cycles. |                     |
| • Designed automated testing and quality assurance framework adapted for AI-generated code, implementing validation pipelines that reduced manual code review time by 70% while maintaining production stability and security standards.                                     |                     |
| • Developed end-to-end MLOps infrastructure for multi-tenant SaaS platform serving global B2B companies, reducing engineering overhead by 60% and accelerating feature delivery from monthly to weekly releases through AI-driven development automation.                    |                     |
| <b>Software Engineer (Machine Learning)</b> , UK Data Service — Colchester, UK   | Jan 2023 — Oct 2025 |
| • Fine-tuned and deployed domain-specific BERT and RoBERTa models using Hugging Face, vLLM, and Ollama for automated metadata classification and disclosure risk assessment, achieving 95%+ accuracy on 100K+ sensitive social science datasets.                             |                     |
| • Designed end-to-end serverless ML infrastructure on AWS (Lambda, Step Functions, EFS) with automated model retraining pipelines, reducing manual data validation workload by 50% and enabling non-technical staff to process complex datasets independently.               |                     |
| • Optimized statistical disclosure control algorithms by migrating from R to C++ using bitmask techniques, achieving 11x performance improvement and enabling real-time processing of datasets with 100k+ records.   |                     |
| <b>Research Officer and ML Instructor</b> , University of Essex — Colchester, UK   | Oct 2021 — Dec 2022 |
| • Migrated quantitative macroeconomic models from MATLAB to C++, reducing simulation runtime by 8x for academic research collaboration with MIT and University of Oslo.  |                     |
| • Taught Data Structures & Algorithms, C/C++, and Machine Learning to 100+ undergraduate and postgraduate students, achieving 4.7/5.0 average course rating.   |                     |

## Projects

### MTG: Cards Reader: [ivan020.github.io/mtgFront/](https://ivan020.github.io/mtgFront/)

- Deployed OCR pipeline using Python (FastAPI), C++, and PostgreSQL on Raspberry Pi with EasyOCR, optimized through quantization and lazy loading, achieving 95%+ recognition accuracy while serving 50+ daily users on resource-constrained hardware, with low latency.

### BWA: Bayesian Weighted Model Averaging

- Developed scikit-learn wrapper implementing Bayesian model averaging for time-series forecasting, achieving 15% improvement in prediction accuracy over baseline models and adopted by external developers.

## Education

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| <b>University of Essex</b> , PhD in Computational Finance   | Oct 2021 — May 2025 |
| • Developed transfer learning framework using PyTorch for Bayesian model averaging to forecast financial variables, published peer-reviewed papers at international AI conferences (INNS), and released open-source forecasting package adopted by external research teams. |                     |
| <b>University of Essex</b> , MSc in Financial Econometrics  | Oct 2020 — Sep 2021 |
| • Built agent-based financial simulation in C++ modeling macroeconomic dynamics under negative interest rates, based on peer-reviewed research.   |                     |