Alexey Dronov

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Experience

Full Stack Engineer Jul 2026 – Present
Really Good Culture *London, UK (Hybrid)*

- Supporting the Tech & Development team across frontend, backend, QA, and data infrastructure for a predictive retail intelligence platform.
- Contributing to product features and data systems that transform consumer reviews and retail data into actionable insights for brands and retailers.

Data Engineer (Freelance) Jan 2026 – Present
Infometeos LLC *Moscow, Russia (Remote)*

- Delivered a methodology for estimating probabilities of weather-related risks utilising statistical methods and leveraging reforecast data to calibrate probabilities.
- Developed custom analytical inputs, dashboards, and validation scripts to ingest, clean, and aggregate raw financial data, cutting manual input by 60%.

Project Coordinator & Mathematics Tutor Nov 2021 – Jul 2022
UoE Informatics Tutoring Scheme *Edinburgh, UK*

- Coordinated a team of over 13 tutors across weekly syncs, workload allocation, and progress tracking for more than 30 students.
- Received the *Edinburgh Award* for community contributions; taught statistics and mathematical analysis to students with no prior background.

Education

The University of Edinburgh Edinburgh, UK
MSc in Data Science *Sep 2024 – Sep 2025*

- *Relevant Modules*: Data Science at Scale, Financial Market Prediction, Distributed Systems, Machine Learning

The University of Edinburgh Edinburgh, UK
BSc in Mathematics *Sep 2020 – May 2024*

- *Thesis*: "Image Analysis" (Grade: 79%) – PyTorch YOLO framework for traffic light classification – 94% accuracy across variable lighting and occlusion conditions.
- *Relevant Modules*: Statistics, Time Series Analysis, Multivariate Data Analysis

Projects

IMDb Large-Scale Data Analysis in Spark Mar 2026

- Built a distributed Spark pipeline to clean, transform, and query a 2.28GB, 41M+ record IMDb dataset.
- Cut average query runtime by 75.7% (59s → 14s) using Catalyst Optimizer, Tungsten Execution Engine, and AQE partition coalescing.
- Reduced shuffle volume via map-side aggregations, early filtering, column pruning, and strict key partitioning.
- Containerized the runtime with Docker Compose; built an interactive CLI to automate multi-trial benchmarking and metric logging.

Financial Markets Prediction using LLMs May 2025 – Sep 2025

- Built an end-to-end forecasting pipeline combining ETF time-series with LLM-derived macro-sentiment signals.
- Ran distributed training across cluster GPUs via SLURM with automated Optuna hyperparameter sweeps, managed through custom Shell CLI scripts.
- Fine-tuned FinGPT with a 6-class sentiment schema; applied logit manipulation for deterministic output and a parametric relevance gate to filter noise.

Technical Skills

Languages: Python, Scala, SQL (SQLite, MySQL), JavaScript/TypeScript, Java, Shell
Data & Infrastructure: Apache Spark, Docker, Docker Compose, Linux/Unix, SLURM, GCP, Git
Libraries: PyTorch, Hugging Face Transformers, PySpark, Pandas, NumPy, Next.js, Tailwind CSS