TOM ULANOVSKI

RESEARCH ENGINEER

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Experienced in building scalable ML pipelines, from distributed training infrastructure to systematic evaluation on industry-standard benchmarks. Passionate about applying deep learning research to impactful real-world applications.

EDUCATION

MSc Computer Science

Tel Aviv University, November 2024 - Present

- Thesis: Deep Learning models for Polyploid species evolutionary history
- Courses: NLP, Deep Learning, ML with graphs (GNNs), ML for HealthCare

B.S Computer Science

Ben Gurion University, October 2021 - August 2024

- Thesis: Algorithms for Cluster Preservation Analysis in Adipocyte Subtypes
- GPA 90.5/100
- 3x Ashalim Program member (top ~5% of students)

RESEARCH EXPERIENCE

Improving LLMs Embeddings via Inter-Layer Geometry

June 2025 - Present

- First Author, ICLR 2026 GRAM Workshop (Tiny Paper Track)
- Developed GNN-based method to enhance LLM embeddings for downstream NLP tasks
- Evaluated on 12 datasets across 9 LLMs, comparing multiple GNN architectures and baselines

Computational Phylogenetics: Polyploid Inference Methods

November 2024 - Present

- Benchmarked 6 inference methods on 21 datasets and 1 million simulated gene trees across 6 evolutionary scenarios
- Built automated evaluation pipeline handling preprocessing, methods excutions, metric computation (edit distance, topology accuracy), and cross-method validation

WORK EXPERIENCE

Junior Data Scientist

RumenEra , Beersheba, February 2024 - October 2024

- Built a preprocessing pipeline in Python to normalize 15,000+ biological features (98% sparsity) using Rarefaction and CLR transformations, significantly improving model stability
- Developed XGBoost models to forecast farm productivity and methane emissions by combining animal health records with multi-modal microbiome DNA data
- Automated data pipelines to merge information from multiple sources and used statistical analysis to quantify the financial impact on farm operations

SKILLS

- Python
- PyTorch
- Optuna
- PostgreSQL
- HuggingFace Transformers
- PyTorch Geometric
- HPC cluster computing
- Large-scale data processing
- Statistical analysis

LANGUAGES

- Hebrew - Native
- English - Fluent
- French - Advanced

AWARDS

- 1st Place Team BlockchainB7 Challenge
- '24 Rhodes Finalist