Kristóf Váradi
Computer Engineering
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github.com/leakedweights

Education

Budapest University of Technology and Economics 2021 - 2025

Computer Engineering, B.Sc.
- Specialization: Systems Engineering
- Thesis topic: Language Models for Predicting Clinical Trial Outcomes
- Notable courses: Information Theory, Probability, Artificial Intelligence
- GPA: 5/5 (prev. semester) 4.12/5 (cumulative)

Experience

HUN-REN Wigner Research Centre for Physics 2024 - present

Research Assistant, Quantum Information and Complex Systems Research Group Budapest
- Contribution to Opreations Research and Quantum Computing projects mostly involving graph algorithms and quantum annealers.

Budapest University of Technology and Economics 2023 - present

Teaching Assistant Budapest
- Laboratory classes for Databases (BMEVITMAB04), ’23 and ’24 autumn.
- Laboratory classes for Basics of Programming (BMEVIEEBA01), ’24 autumn.
- Laboratory classes for Mobile and Web Development (BMEVIAUAC00), ’24 autumn.

Evosoft (subsidiary of Siemens) 2022 - 2023

Full-Stack Developer (internship) Budapest
- Development of cloud infrastructure with AWS and Terraform.
- Development of REST APIs and single-page applications.

Software Projects

Isocline 2024

Text-guided consistency model for digital terrain synthesis: `leakedweights/isocline`.
- Tools & technologies: JAX, Flax, HF Transformers
- Implementation of improved consistency training for terrain heightmaps.
- Dataset curation and augmentation with terrain captions.
- Text-guidance with CLIP embeddings.

Mincy 2024

Tools for training Consistency Models in JAX, source: `leakedweights/mincy`
- Tools & technologies: JAX, Flax
- Implementation of *Improved Techniques for Training Consistency Models*.
- Classifier and classifier-free guidance

Thorium 2023

An API to create AI chat applications with semantic search, source: `leakedweights/thorium`
- Tools & technologies: Python, AWS, FastAPI, Terraform, Langchain
- Retrieval-Augmented chat with ChatGPT using the OpenAI API
- Embedding creation and storage with the OpenAI API, DynamoDB and Pinecone
- Automated deployment to AWS Fargate using GitHub Actions and Terraform

Workshops, Presentations

1. Mátyás Koniorczyk, Kristóf Váradi, Sandor Szabo. Graph Cliques and Quantum Annealing. In *VOCAL 2024: The 10th VOCAL Optimization Conference: Advanced Algorithms*. Corvinus University of Budapest, June 2024

2. Kristóf Váradi. Clique Search on Erdős-Rényi Graphs – Methods for D-Wave Quantum Annealers. In *Pécs Workshop on Quantum Information*. Pécs Regional Committee, Hungarian Academy of Sciences; HUN-REN Wigner Research Centre for Physics, May 2024

Skills and Technologies

Cloud/Databases: AWS, SQL, Terraform, Docker
Preferred programming languages: Python, TypeScript, C++
Languages: English (professional), Hungarian (native), German (elementary)