

Volodymyr Halian

MACHINE LEARNING ENGINEER | STUDENT / INTERNSHIP

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PROFILE

AI BSc student focused on PyTorch model development, feature pipelines and reliable evaluation. Completed a university multi-label audio ML project and built reproducible attention and graph-learning demos. Looking for internship or working-student ML roles.

TECHNICAL SKILLS

ML & DL: PyTorch, neural networks, multi-label classification, graph convolution, self-attention

Data & tooling: Python, NumPy, Pandas, scikit-learn, MFCC, Matplotlib, Git

Evaluation: Recording-aware splits, validation, class-wise analysis, reproducible tests

SELECTED MACHINE LEARNING PROJECTS

Sound Event Recognition | University MLPC Project

- Prepared multi-label acoustic targets from noisy annotations; engineered MFCC features for a 15-class sound-event task.
- Worked with a PyTorch AudioMLP baseline and recording-disjoint splits; designed evaluation around class-wise precision/recall, F1 and data leakage risks.

Transformer Attention Lab | PyTorch Portfolio Demo

- Implemented multi-head scaled dot-product self-attention, causal and key-padding masks, feed-forward and residual Transformer blocks.
- Passed six deterministic correctness checks covering masked attention, causal prefix invariance and finite backpropagation gradients; experiments use synthetic tensors.

Graph Neural Networks: GCN vs MLP | Portfolio Demo

- Implemented a two-layer GCN with normalized adjacency and a feature-only MLP baseline in PyTorch.
- Compared both models on matching train/validation/test splits of a seeded, synthetic 240-node graph; documented scope and limitations.

APPLIED ENGINEERING EXPERIENCE

Mousse Bakery | Live Business Web & AI-Assisted Workflows

- Contributed to customer-facing web workflows, product catalog presentation and structured cake-order inquiry processes.
 - Applied business rules to AI-assisted customer communication and quote preparation, with human review for exceptions.
- moussebakery.com

EDUCATION & RESEARCH

Johannes Kepler University Linz — BSc Artificial Intelligence | Mar 2025 – Jun 2028 (expected)

Selected coursework: Machine Learning, Pattern Classification, Unsupervised Learning, Statistics for AI, Algorithms.

Upcoming seminar & practical work: Causal vs Full Attention (Transformer attention mechanisms).