Mika Vohl

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EDUCATION

McGill University   Sept. 2023 – May 2027
Bachelor of Science, Joint Honours in Computer Science and Physics   *Montreal, Canada*
- **Cumulative GPA:** 3.92/4.0 - Dean's Honour List 2023/2024
- **President - Hack4Impact:** Led a 45+ member student collective to build full-stack applications for 3 nonprofits simultaneously; oversaw and mentored developers across 3 teams using React, Express, TypeScript, PostgreSQL
- **Full Stack Developer - McHacks:** Built and maintained software to operate McGill's largest hackathon

EXPERIENCE

Researcher   September 2025 – Present
McGill AI Society   *Montreal, Canada*
- Researching effective imputation in medical machine learning alongside 5 undergrads and a Mila graduate mentor
- Trained Transformer and Diffusion models on MIMIC-IV dataset, analyzing interpretability via attention matrices

Software Developer Intern   May 2025 – Aug. 2025
Streamwise   *Montreal, Canada*
- Fine-tuned an open source Conformer-Transducer model for speech recognition in real-world livestreams, cutting transcription errors from 26% to 10% on noisy and muffled audio
- Built a low-latency audio/video pipeline in Go with GStreamer and FFmpeg, handling transcoding, buffering, multiqueueing, and real-time audio replacement in livestreams based on keyword detections
- Built a PyTorch audio augmentation module for adding imperfections to audio (reverb, pitch, clip, noise, etc.)
- Containerized and orchestrated services with Docker & Kubernetes, managing networking, scaling, and lifecycles

Software Engineering Intern   May 2024 – Sept. 2024
myBonum   *Toronto, Canada*
- Developed a Flask REST API to manage communication with an Azure SQL database, enabling essential data retrieval and modification capabilities for myBonum, a US-based healthcare startup
- Built a Stripe API wrapper, integrating subscription and billing directly with the existing platform and database

Software Developer Intern   June 2023 – Sept. 2023
CAIL   *Toronto, Canada*
- Developed features for an enterprise terminal interface to manage HP NonStop servers, including adding SSL support for secure connectivity, and unifying functionality between Android, Windows, Linux, and Mac.
- Optimized performance by implementing on-demand redrawing, faster sorting algorithms, and input-output buffering, increasing text output speed by 80% and improving overall responsiveness

PROJECTS

Stitch - 1st place winner at McGill AI Society Hacks 25-26 | *Typescript, React, Python*   Nov. 2025
- Built a no-code platform enabling users to drag and drop neural network components to design, train, and test models for handwritten digit recognition, making deep learning concepts accessible to beginners
- Provided users end-to-end control of real PyTorch models by dynamically compiling and executing custom model instances from user specifications, streaming live results back to the user via Server-Sent Events
- Integrated GPT-4.1 into the model-building interface, enabling the chatbot to directly improve the user's model

Predicting Chaos with Convolutional Neural Nets | *Python, PyTorch, Typescript*   May 2025
- Trained a CNN to predict the 5th next state of Conway's Game of Life, a chaotic system, with 99.98% accuracy
- Built a custom Game of Life engine to generate 50,000 synthetic board states for training a convolutional network

PyTorch-Style Tensor Autograd Engine | *Python, Numpy*   June 2025
- Developed an autograd engine supporting tensors for efficient computation and integration into existing workflows
- Significantly accelerated neural network computations using Numpy's vectorized operations

TECHNICAL SKILLS

Languages: Python, Go, Java, JavaScript, TypeScript, SQL, C, Bash, HTML/CSS, PHP, Swift
Frameworks & Libraries: PyTorch, Flask, React, Tailwind, NumPy, Tensorflow, Matplotlib, Pandas
Developer Tools: Git, Docker, Kubernetes, Github Actions, PostgreSQL, AWS, Supabase
Certifications: Stanford Machine Learning Specialization (July 2024) - 3 courses on various ML topics