Gian Mario Favero

Email · Website · GitHub · Google Scholar

Education

McGill University Sept. 2023 - Present
MSc. (Thesis) Electrical and Computer Engineering (GPA: 4.0) Montreal, QC
- Supervised by Tal Arbel and Chris Pal.
- Thesis: Diffusion models, focusing on computationally efficient and scalable implementations, controllable generation, and synthesis of medical images/video.

University of Windsor Sept. 2019 - Aug. 2023
BASc. Electrical and Computer Engineering (GPA: 99/100) Windsor, ON
- Held highest GPA in class from 2019-2023.

Publications

*__Favero, G.__, *Saremi, P., Kaczmarek, E., Nichyporuk, B., & Arbel, T. (2024). Conditional Diffusion Models are Medical Image Classifiers that Provide Explainability and Uncertainty for Free *(In Review)*.

*__Favero, G.__, *Ya, G., Luo, Z. H., Jolicoeur-Martineau, A., & Pal, C. (2024). Beyond FVD: Enhanced Evaluation Metrics for Video Generation Quality. *arXiv preprint arXiv:2410.05203*.

Sacchetti, L., Jianu, O., and **Favero, G.**, "Electrochemical Analysis of High-Capacity Li-Ion Pouch Cell for Automotive Applications," *SAE Technical Paper 2021-01-0760*, 2021. DOI.

Experience

Disney Research | Studios March. 2025 - Present
Research Intern (Incoming) Zurich, Switzerland

Mila – Quebec AI Institute Sept. 2023 - Present
ML/AI Research Student Montreal, QC
- Designed distributed training pipelines in PyTorch for controllable image and video diffusion.
- Leveraged HPC clusters and multi-modal datasets to model neurodegenerative disease progression.
- Developed open-source PyTorch implementations of Simple Diffusion and ControlNet for research use.

Stellantis Sept. 2022 - Dec. 2022
Software Integration Intern Windsor, ON
- Designed and built a new low-voltage system validation platform used in all North American facilities.
- Created and maintained an organization-wide SharePoint project management hub.
- Conducted failure root cause analysis using CAN tools on vehicles in the field.

Tesla Inc. Jan. 2022 - May 2022
Software Integration Intern Palo Alto, USA
- Performed firmware and hardware integration tasks on upcoming vehicle platforms.
- Designed and built an automated system enabling rapid full-scale charging tests on vehicles.
- Built new features and expanded subsystem test coverage on automated high-voltage system testing platforms.

APAGCoSyst May 2021 - Sept. 2021
Embedded Software Intern Windsor, ON
- Created prototype PCBs and integrated proof-of-concept vehicle electronics
- Developed capacitive touch interfaces, ambient lighting solutions, and climate control HMIs

Funding/Awards

FRQNT Master's Scholarship: Valued at $20,000/year. One of ten students awarded in Quebec.
Governor General's Silver Medal: Highest academic standing in a 4-year Bachelor honors program
Governor General's Bronze Medal: Highest academic standing in their secondary school class