YASAMAN PARHIZKAR

Toronto, Ontario * 647-764-9656 * yasaman.parhizkar@gmail.com
GitHub: https://github.com/yasamanparhizkar * LinkedIn: https://www.linkedin.com/in/yasamanparhizkar/

EXPERIENCE

Data Scientist October 2024 - Present

RBC, Toronto, ON

- Processed big data (~10M records) in ~2 hours using Spark, Hadoop and Airflow to find patterns and anomalies.
- Organized 2 workshops to onboard a team of ~10 data scientists to a new SaaS platform introduced by RBC Borealis.
- Publicly presented to ~20 data scientists the potential of a new mathematical field to improve our group's products.
- Designed statistical and graph-based models to find fraudulent clients.

Executive Committee Member, Internal Hackathon February 2025 - August 2025

RBC, Toronto, ON

- Organized a 2-day hackathon along with 2 other committee members which gathered 10 participants across 3 teams: data scientists, red teamers and threat hunting specialists. Demos will be presented in a company townhall session and judged by 2 VP/senior directors.

Lecturer, Peer-led Study Sessions March 2025 – June 2025

RBC, Toronto, ON

- Lectured in regular 1-hour sessions every 2 weeks covering parts of 2 textbook to 5-10 colleagues.

Technical Facilitator July 2024 – September 2024

Vector Institute, Toronto, ON

- Mentored 2 out of 10 participating teams and prepared 1 out of 5 tutorials for a 5-day bootcamp, along with ~6 other facilitators.

Project Collaborator January 2024 – October 2024

Vector Institute, Toronto, ON - York University, Toronto, ON

- Developed, in a team of ~10 developers, a comprehensive framework for LLMs' training and evaluation (link).
- Extracted ~17M image-text pairs from scientific articles to supply ~2M high quality pairs for training LLMs (link).
- Parameter and architecture tuned LLMs trained with contrastive loss and benchmarked the effects (paper).
- Preprocessed fMRI data, including denoising, registering and tokenizing to be consumable by LLMs.

Machine Learning Engineer June 2024 – June 2024

Anchor Automation Inc., Toronto, ON

- Benchmarked 4 models (NN, GAN, GCN and transformer) to upsample 3D point-clouds using a training cloud with ~68M points and 4 target metrics (CD, EMD, runtime and validation loss).
- Trained, tuned, reviewed, and produced evaluation and visualization reports of the machine learning models.

PUBLICATION

- Y. Parhizkar, G. Cheung, and A. W. Eckford. "Signal Processing in the Retina: Interpretable Graph Classifier to Predict Ganglion Cell Responses." IEEE Open Journal of Signal Processing (2024).
- S. Roy*, Y. Parhizkar* (*equal contribution), F. Ogidi, V. R. Khazaie, M. Colacci, A. Etemad, E. Dolatabadi, A. Afkanpour. "Benchmarking Vision-Language Contrastive Methods for Medical Representation Learning.", arXiv:2406.07450 (2024).
- N. Baghbanzadeh*, A. Fallahpour*, Y. Parhizkar* (*equal contribution), F. Ogidi, S. Roy, S. Ashkezari, V. R. Khazaie, M. Colacci, A. Etemad, E. Dolatabadi, A. Afkanpour. "Advancing Medical Representation Learning Through High Quality Data.", arXiv:2503.14377 (2025).

HONORS AND AWARDS

People's Choice, Global Security Dragons' Den July 2025

RBC, Toronto, ON

- Best product chosen by participants in an event where groups across Global Security pitch their products to VPs and SVPs to gain support.

First Place, AI Buildathon February 2025

Inception Studio, Toronto, ON

- Best project developed in a 2-day buildathon with the goal of creating startups and attracting VCs.

Distinguished Project, Project Day Fair February 2021

University of Tehran, Tehran, Iran

- Granted to exceptional projects chosen from all undergraduate students' final projects at the ECE department.

Bronze Medal, National Physics Olympiad October 2015

Ministry of Education, Young Scholars Club, Tehran, Iran

- Nation-wide exam of advanced physics for high school students.

PUBLIC SPEAKING

Speaker, AI Tinkerers April 2025

Shopify, Toronto, ON

- Demoed a project along with 2 of my co-developers to >100 people at an event held by AI Tinkerers (LinkedIn post).

Poster Presenter, Graph Signal Processing Workshop 12-14 June 2023

Oxford University, Oxford, UK

- Organizer applauded this work as the "best poster presentation."

EDUCATION

M.A.Sc. in Computer Engineering - York University, Toronto September 2021 - August 2023

- Thesis: developing an interpretable graph-based classifier to predict retinal neurons' responses.
- Featured in York University's newsletter.

B.Sc. in Electrical Engineering - University of Tehran, Tehran, Iran September 2016 - July 2021

- Final project: quantum algorithm simulation using IBM's quantum computing API, Qiskit.
- Granted an exceptional degree project award.

TECHNICAL SKILLS

Python:	Deep learning: pytorch, pytorch lightning and fabric, keras, scikit-learn, tensorflow. Data processing: pandas, pyspark, pyarrow, scipy, matplotlib, seaborn, plotly. Configuration: yaml, hydra, hydra-zen, gin, argparse.
CI/CD:	Git, GitHub workflows and actions, poetry, uv, pre-commit hooks, shell scripting, linux.
Coding style/standard:	PEP8 style guide, numpy-format docstrings, ruff, flake8, mypy for type checking.
ML development:	Weights and Biases, Slurm, remote vscode, checkpointing, pytorch DDP setup, cuda installation.
ML databases:	HuggingFace, PhysioNet, PubMed, Zenodo, Kaggle, Google Datasets, OpenNeuro.
Productivity:	Cursor, Replit, Scrum, Jira, Clickup, Notion, Confluence, Mural.