NABILA ABRAHAM

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ABOUT ME

I'm an applied data scientist interested in graph neural network/ social network analysis problems. I'm looking for roles to challenge me and bring immediate value to the business using data science. In my spare time, I try to sharpen my skillset by teaching, mentoring and volunteering with a local ML community in Toronto.

SKILLS

- Python, SQL, Bash, Spark
- GCP, AWS
- PyTorch, Keras, Git, ROS
- Django, Flask

EDUCATION

RYERSON UNIVERSITY

MASc. in Electrical & Computer Engineering
2017 – 2019 | Toronto, ON
MASc thesis: *Towards improved medical image segmentation*

- Developed a custom loss function for class imbalance (over 100+ citations)
- Proposed a multimodal framework to improve feature extraction for segmentation

RYERSON UNIVERSITY

B.Eng in Biomedical Engineering
2012 – 2017 | Toronto, ON
Capstone thesis: *Wireless intraoperative neuromonitoring system for spinal surgery*

PUBLICATIONS

Please view my Google Scholar for a detailed list

WORK EXPERIENCE

Loblaw Companies Canada | Data Scientist (R&D)

February 2020 – Present

- Leading COVID19 data migration by building in house probabilistic matching systems in GCP to migrate millions of records of patient data with high confidence matches (76% match yield boost over legacy methods with over 90% confidence)
- Implemented COVID19 demand forecasting insights to assist our pharmacy business units prepare for the COVID19 vaccination rollout
- Currently investigating graph neural networks and neo4j Graph Data Science toolkit for graph based in-house entity resolution
- Leading Research Huddles, a company initiative to share applied R&D ideas, keep on top of state-of-the-art research & consult on ML projects

Lunenfeld-Tanenbaum Research Institute (Sinai Health System) | Deep Learning Researcher

July 2019 – January 2020

- Developed deep learning models for prostate cancer detection
- Provided 3d CAM/neural network visualizations for clinical team
- Co-authored a publication regarding clinical decision making on prostate cancer detection with supervised 3d CNNs

Ryerson Multimedia Lab | Graduate Student Researcher

Sept 2017 – Oct 2019

- Investigated loss functions and generative models to improve semantic segmentation of medical data
- Partnered with Shaftesbury VR to develop predictive cues on player stress using time series analysis on biomedical signals *(patent sold)*

TEACHING/MENTORSHIP

SharpestMinds | Data Science Mentor

March 2020 – Present

- Mentoring data scientists to create industry relevant portfolios in the fields of healthcare and retail
- Testimonials & badges relating to "intuitive explanations" and "helpful introductions" available on my profile here (sign up required)

UofT School of Continuing Education | Assistant Instructor

Nov 2020 – Present

- Teaching a cohort of 30+ adult learners the concepts of Git, Python, SQL, CNNs, RNNs, Gradient boosting, PCA, NLP via AWS, Blockchain & more in a 6-month long FinTech bootcamp

VOLUNTEER

GNN Stream Owner | Aggregate Intellect Socratic Circles

Ryerson Rams Robotics Team | Machine Learning Mentor