Abdelrahman Zayed

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Education

Sep 2020-present	PhD in Computer Science. **Quebec Artificial Intelligence Institute (Mila), Montréal, Canada**. • Cumulative GPA : 4.0/4.0 • **Supervisor** : Professor Sarath Chandar • **Research interests** : Natural language processing, causal inference, neuroscience, and medical imaging.
May 2018-April 2020	Master of Science in Electrical and Computer Engineering. **Concordia University, Montréal, Canada**. • Cumulative GPA : 4.2/4.2 • **Supervisor** : Professor Hassan Rivaz
July 2016	Bachelor of Science in Electrical Engineering. **Cairo University, Giza, Egypt**. • Summa Cum Laude • Cumulative GPA : 3.92/4.0 (Top 3 %)

Industrial Experience

May 2021-present	**Graduate Research Assistant**, Microsoft. Montréal, Canada. • **Supervisor** : Samira Shabanian • Working on analyzing gender bias mitigation methods in text classification.

Academic Experience

May 2020-Aug 2020	**Research Assistant**, Quebec Artificial Intelligence Institute (Mila). Montréal, Canada. • **Supervisor** : Professor Sarath Chandar • Worked on the application of constraints to the output of neural networks.

May 2018- **April 2020**	**Research Assistant**, Image Processing and Characterization of Tissue Laboratory. PERFORM Centre, Montréal, Canada. • **Supervisor** : Professor Hassan Rivaz • Applied machine learning techniques in ultrasound imaging for detecting cancer tumours.
May 2019- **Jan 2020**	**Research Assistant**, Neural ABC Laboratory. Concordia University, Montréal, Canada. • **Supervisor** : Professor Christopher J. Steele • Developed a normative model of the structural connections of the human brain, that can be used to predict the network effects of brain lesions.
Oct 2016- **Dec 2016**	**Research Assistant**, Center of Wireless Studies. Cairo University, Giza, Egypt. • **Supervisor** : Professor Mohamed Khairy • Worked in optical wireless communications in 5G networks.

Scholarships and Awards

2020-2021	-Graduate Research Assistantship (25,000 $ per year). Polytechnique Montréal, Montréal, Canada.
2019	-QBIN Scholarship for Master's Students (5,000 $). The Quebec Bio-imaging Network (QBIN), Montréal, Canada.
2019	-CAE Scholarship In Engineering Excellence (2,434 $). Concordia University, Canada.
2018-2020	-Graduate Research Assistantship (15,000 $ per year). Concordia University, Montréal, Canada.
2018	-Merit Scholarship (5,000 $). Concordia University, Montréal, Canada.
2011-2016	-Medal of Distinction with Honor in Undergraduate Studies. Cairo University, Giza, Egypt.

Teaching

Fall 2016	**Teaching Assistant**. Cairo University, Giza, Egypt. • Conducted tutorials and graded exams for an undergraduate course in Analog Communications.
Fall 2020	**Teaching Assistant**. Polytechnique Montréal, Canada. • Conducted tutorials and graded assignments/exams for an undergraduate/graduate course in machine learning.
Fall 2021	**Lead Teaching Assistant**. Polytechnique Montréal, Canada. • Conducted tutorials and graded assignments/exams for an undergraduate/graduate course in machine learning.

Publications

1-**A. Zayed** and H. Rivaz "Fast Strain Estimation and Frame Selection in Ultrasound Elastography using Machine Learning" - IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control (TUFFC).

2-**A. Zayed**, Y. Iturria-Medina, A. Villringer, B. Sehm and C. Steele "Rapid Quantification of White Matter Disconnection in the Human Brain" - IEEE EMBC 2020, 42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society.

3-**A. Zayed**, G. Cloutier and H. Rivaz "Automatic Frame Selection using CNN in Ultrasound Elastography" - IEEE EMBC 2020, 42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society.

4-**A. Zayed** and H. Rivaz "Automatic Frame Selection Using MLP Neural Network in Ultrasound Elastography" - ICIAR 2019, 16th International Conference on Image Analysis and Recognition.

5-**A. Zayed** and H. Rivaz "Fast Approximate Time-Delay Estimation in Ultrasound Elastography Using Principal Component Analysis" - IEEE EMBC 2019, 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society.

Review

IEEE Transactions on Medical Imaging (TMI), 2020 (Impact Factor : 10.72).

Presentations and Posters

Dec 11, 2020	1-Mostafa ElAraby, Guy Wolf and Margarida Carvalhoy "Identifying Efficient Sub-networks using Mixed Integer Programming". Conference on Neural Information Processing Systems (Neurips).
Feb 7, 2020	2- **A. Zayed** , Y. Iturria-Medina, A. Villringer, B. Sehm and C. Steele "Quatifying White Matter Disconnection in Patient Populations". Annual QBIN Scientific Day, Montréal, Canada.
May 10, 2019	3- **A. Zayed** and H. Rivaz "Automatic Frame Selection Using MLP Neural Network in Ultrasound Elastography" . 6th Annual PERFORM Centre Research Conference, Montréal, Canada.
May 9, 2019	4- **A. Zayed** and H. Rivaz "Automatic Frame Selection Using MLP Neural Network in Ultrasound Elastography". Colloque Annuel ReSMiQ, Concordia University, Montréal, Canada.

Community Service

June 2019- Sep 2019	**Student volunteer**, Quebec Bio-imaging Network (QBIN). Montréal, Canada.
July 2020- Aug 2020	**Volunteer** at Marché Ahuntsic-Cartierville. Montreal, Canada.
July 2019- Aug 2019	**Volunteer** at Le Magasin du Chaînon. Montréal, Canada.

Languages

-English, French and Arabic.

Skills and Hobbies

Python (Pytorch/Tensorflow)-MATLAB-C/C++-Java.
Windows Operating System-Linux Operating System.
Playing Piano.