Abdelrahman Zayed

abdel.zayed.1@gmail.com — (438) 520-7196

7000, Avenue Wiseman, Montréal, Quebec, Canada (Apt. 8)

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** : Recurrent neural networks, natural language processing, lifelong learning, reinforcement learning, 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 mitigating gender bias in neural networks using reinforcement learning.

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 exams for an undergraduate 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.

Skills and Hobbies

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

Languages

-English, French and Arabic.