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** : Recurrent neural networks, natural language processing, lifelong learning, optimization, 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 %)

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 : 7.816).

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.