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| **Education** |  |
| *University of Waterloo* **| Waterloo, ON** | **2019 - 2022** |
| Master of Mathematics **| Computer Science**  Research focus: AI, Machine Learning and Computer Vision  TA: AI/ML, Functional, C and Concurrent Programming, Data Structures and Operating Systems |  |
| *McGill University* **| Montreal, QC** | **2012 - 2017** |
| Bachelor of Engineering**| Honors Electrical Engineering**,Minor: Software Engineering |  |
| **Experiences** |  |
| ***Data Scientist, Lawfully* |** Manhattan, NY **| Python, Scala, SQL, AWS** | 1. **- Present** |
| * Working as a data scientist and backend engineer to simplify USCIS immigration process * Scraped 100 million+ immigration data for future AI projects * Created feature to show complete immigration history for users |  |
| ***AI Engineer Intern, Huawei* |** Ottawa, ON **| Python, TensorFlow, PyTorch, Keras** | **2021 - 2022** |
| * Worked with wireless and traffic data to improve Autonomous driving * Created a simulator in Python to simulate travel pattern of thousands of vehicles in a city * Developed patent pending AI for next gen navigation system * Build AI models with PyTorch and sklearn in Python with dataset of over 32 million entries * Build Federated Learning models using TensorFlow for thousands of image and Fintech data |  |
| ***NLP Research Intern, Nuance Communications* |** Montreal, QC **| Python, TensorFlow** | **2020** |
| * Implemented new strategies and models to improve Automatic Speech Recognition * Research and implemented BERT models to analyze millions of online product reviews |  |
| ***Lead Software Engineer , Hvr Tech*** **|** Toronto, ON **| Python, Flutter, Dart Lang, SQL** | **2019** |
| * One of the chief developers for a brand new social media browser, with Python and SQL * Created the mobile app (beta available [here](https://hvr.world/)) from scratch using Flutter, Dart Lang and SQL |  |
| ***Full-stack Engineer, NexJ Health*** **|** Toronto, ON **| NodeJS, MongoDB, Express** | **2018 - 2019** |
| * Worked on a state-of-the-art health app used by over 10,000 users worldwide * Improved user experience by integrating “login with username” option * Increased user engagement by designing a user points awards system from scratch * Fixed over 100 bugs on the frontend and backend |  |
| ***Backend Software Engineer, Montrium*** **|** Montreal, QC **| C#, Python, Java, SQL** | **2017 - 2018** |
| * Worked on the backend for a new platform for pharmaceutical study and trial management system, used by over 100 pharmaceutical companies world wide * Created APIs and primary security functions using .NET Core, C#, and Cosmos GraphDB * Led a team of five to fully automate unit and system testing using Selenium on Java and Powershell to reduce software testing phase from days to mere minutes * Developed a deep NN using TensorFlow to translate company’s solutions to 7 languages |  |
| ***Electrical Engineering Student, CNRL*** **|** Fort Mackay, AB **| C** | **2016** |
| ***Robotics Engineering Student, St. Joseph’s Hospital*** **|** London, ON **| C++, Python** | **2013 - 2015** |
| **Thesis Projects** |  |
| Graduate **| *Semantic Segmentation*****|** University of Waterloo **|** **Python, PyTorch** | **2020 - 2022** |
| * Using image level data and **approximate class size** to improve accuracy of Weakly Supervised Semantic Segmentation. Thesis title: [**Volumetric Weak Supervision for Semantic Segmentation**](https://uwspace.uwaterloo.ca/handle/10012/18321) * Improved the accuracy by over 6% mean Intersection over Union |  |
| Undergraduate **|** ***Image Captioning*****|** McGill University **|** **Python, TensorFlow** | **2016 - 2017** |
| * Used Convolutional and Recurrent Neural Networks from TensorFlow to generate image captions with text descriptions in less than 5 seconds using Python, MatLab and CUDA | **Honors and Awards**  Master of Mathematics Full Scholarship  **University of Waterloo**  Honors List  Entrance Scholarship  Clifford Knowles Bursary  George Duggan Bursary  **McGill University**  Deans Award  NSERC-USRA  **UWO**  2019 - 2021  2014 - 2017  2012 - 2017  2016  2015  2015  2013 |
| **Projects** |  |
| *Applied Machine Learning and Data Optimization* **|** **Python** | **2017 - Present** |
| * Programmed several different optimization methods, including Gradient and Coordinate Descents, ALM and ADMM, Graph Clustering, noise reduction and others * Created models for pattern recognition, Semantic Segmentation and Object Detection, using neural networks, support vector machines, decision trees and more * Used PyTorch libraries and CNN for unsupervised single image depth prediction * Used Intel RNN and data sets for speech recognition |  |
| *Various Node, React, Angular projects* **| NodeJS, ReactJS, AngularJS, MongoDB** | **2018 - Present** |
| * Made various API and CRUD apps for user auth, weather app, photo editing and others * Used the latest JS tech, as well as MongoDB, Google, YouTube and several other APIs |  |
| *Notable undergrad projects* **| Java, C** | **2014 - 2016** |
| * Designed and created a wireless mouse using the ARM Cortex STM32F4 board * PM of a team of six, designed a robot to perform a “Search and Rescue Mission” as seen [here](https://www.youtube.com/watch?v=Q4poGF2vAXk) |  |
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****[](http://sharhadbashar.com/)**[](https://www.linkedin.com/in/sharhad-bashar/)[](https://github.com/SharhadBashar)[](mailto:sharhad.bashar@mail.mcgill.ca)Image result for mcgill crest**

\* >= 4 stars -> Advanced

== 3 stars -> Intermediate

<= 2 stars -> Beginner

**Sharhad Bashar**

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**Languages:**

* **Python**
* **Java**
* **C**
* **C#**
* **Dart Lang**
* **HTML/CSS**
* **MATLAB**
* **Visual Basics**
* **C++**

**Libraries:**

* **TensorFlow**
* **PyTorch**
* **OpenCV**
* **SciPy**
* **Scikit-Learn**
* **Keras**
* **Theano**
* **Pandas**
* **AWS**

**Frameworks:**

* **ASP.NET Core**
* **Node**
* **Angular**
* **React**
* **Selenium**
* **Flutter**

**Database:**

* **PostgreSQL**
* **MongoDB**

**Scripting:**

* **Bash**
* **Git**
* **PowerShell**

**Skills\***