Montreal, Canada
GitHub: joshholla

JOSHUA HOLLA

joshua.holla@mail.mcgill.ca
https://joshholla.github.io/

EDUCATION

Master of Science **McGill School of Computer Science** **Sep 2018 – Aug 2021**

- Specialized in Deep Reinforcement Learning and Machine Learning. Current GPA of **3.78/4**.
- Supervised by **Prof. David Meger** and **Prof. Doina Precup.** Member of the ***Mobile Robotics Laboratory*** and the ***Reasoning and Learning Laboratory.***
- Awarded the NSERC Canadian Robotics Network (NCRN) grant in 2019.
- Awarded the **DeepMind Graduate award** in 2020 and 2021.

Bachelor of Engineering **Manipal Institute of Technology** **2009 – 2013**

- **Gold Medalist** at Manipal Institute of Technology. Medals are awarded to less than **4% of graduating students** for academic excellence. Graduated with a CGPA of **9.28/10.**
- Coached a workshop on programming microcontrollers as the electronics head of the IEEE (Institute of Electrical and Electronics Engineers) Student Body at Manipal.

EXPERIENCE

AI Researcher **MILA (Quebec Artificial Intelligence Institute)** **May 2019 – Aug 2021**

- Researched off-policy reinforcement learning algorithms to tackle the off-dynamics problem setting.
- Implemented **Deep Learning** techniques to estimate importance sampling probability density ratios.
- Competitively selected to collaborate with researchers at **Google Brain** and **Montreal Neurological Institute** to unearth correlations between algorithmic **Reinforcement Learning** (RL) and human problem-solving.

Team Lead – Stave Apps **Pinao Consulting LLC** **Dec 2017 – Aug 2018**

- Led the team that built ServiceNow Applications for procurement and asset tracking.

R&D Head – CareVision **BetOnIndia Technologies Pvt. Ltd.** **Dec 2015 – Oct 2017**

- Designed the system architecture for a home security camera. Built and ran the team around our product.
- Optimized the embedded system codebase. Took CPU usage from **92% to 26%**.
- **Saved an estimated $100,000/year** at scale, while reducing livestreaming lag from **7sec to 0.5sec** by pivoting from a media server implementation to p2p streaming.

Software Engineer **ABB Global Industries and Services Ltd.** **Aug 2013 – Mar 2016**

- Engineered test scripts for the Drives Remote Service Project, a cloud-based solution meant to perform predictive analytics and aid the maintenance of global installations of electric drives.

SKILLS

- **PyTorch** with expertise in developing **Reinforcement Learning** algorithms and frameworks in **Python**.
- Proficient with **Machine Learning** (ML) concepts and algorithms.
- Prototyping of applications on hardware such as **EdgeTPU devices** and **Raspberry Pi** computers. This brought about experience with **TensorFlow** and TFLite.

ADDITIONAL EXPERIENCE

- Advised the core team of *Healthkon*, a telemedicine for rural healthcare startup in India
- Developed rapid prototyping and hardware expertise with Fracktal Works, a 3D printer manufacturer.
- Assisted the teaching of COMP 417 (Introduction to Robotics and Intelligent Systems) during Fall 2019.