

VASUDEV SHARMA

Toronto, Canada

☎ 647-533-4447

✉ vasu@cs.toronto.edu

🌐 [linkedin.com/in/vasudev-sharma-](https://www.linkedin.com/in/vasudev-sharma-)

🐙 github.com/vasudev-sharma

Education

University Of Toronto

Master of Science in Applied Computing (Computer Science)

GPA: 4.0/4.0

Sep. 2021 – Dec. 2022 (Expected)

Toronto, Canada

VIT University

B.Tech in Computer Science

CGPA: 9.49/10.0

Sep. 2016 - June 2020

Vellore, India

Relevant Coursework

- CSC2515 Machine Learning (Audit)
- CSC2541 ML in Healthcare
- CSC2547 Computer Vision
- CSC2511 NLP (Audit)
- CSC2537 Info. Visualization
- CSC2516 Deep Learning

Experience

University of Toronto

Teaching Assistant

Sept. 2021 – Present

Toronto, Canada

CSCC11: Introduction to Machine Learning

Winter 2022

CSCA20: Introduction to programming

Fall 2021

NeuroPoly, University of Montreal

Nov. 2020 – Aug. 2021

Machine Learning Engineer

Montreal, Quebec, Canada

- Developed an open source software AxonDeepSeg - Axon / Myelin segmentation using Deep Learning.
- Implemented and integrated U-Net model for segmentation on Keras framework for histological data (SEM and TEM).
- Fine-tuned models resulting in a performance gain of **5%**, refactored **40% codebase** and performed an exhaustive comparative analysis with state-of-art methods.
- Researched and incorporated dynamic functionality for handling overlapping patch effect on microscopy images

CNRS, CerCo lab

Dec. 2019 - June 2020

Visiting Deep Learning Research Intern

Toulouse, France

- Researched the influence of EEG on stimulus, stimulus on EEG, and EEG on EEG primarily for the occipital electrodes.
- Improved correlation value(r) by **13%** and improvised on the next **1 sec horizon time steps** in comparison to the baseline models using state-of-the-art time series models.
- Experimented the study; "*In Alpha Oscillations strong perceptual echoes exist at 10Hz frequency*" with various architectures - 1D CNN, LSTM, WaveNet, Conv-LSTM, ARIMA, and an ensemble of these models. (GitHub Repo)

Publications

AxonDeepSeg: Automatic Myelin and Axon Segmentation Using Deep Learning

July 2020

([LINK](#))

OHBM 2020, Canada

High Dimensional Fuzzy Outlier Detection

Aug. 2019

([LINK](#))

ICONIP2019, Australia

A Fuzzy Constraint Based Method for Outlier Detection

Aug. 2019

([LINK](#))

ICIC2019, China

Technical Skills

Languages: Python, Shell Script, HTML

Developer Tools: VS Code, Google Cloud Platform

Technologies/Frameworks: PyTorch, NumPy, Scikit-learn, Pandas, Keras, OpenCV, Git, Docker, GitHub, AWS

Achievements / Awards

Vector Scholarship in Artificial Intelligence 2021

Sept. 2021

Scholarship ([LINK](#))

Vector Institute and University of Toronto

Charpak Lab France Scholarship

Sept. 2020

Award and Scholarship ([LINK](#))

Government of France

Special Achiever Award

2019

Award ([LINK](#))

VIT University