

## TRYAMBAK KAUSHIK, PhD

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### *SOFTWARE & SKILLS*

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**Python:** Machine Learning (sci-kit learn), Deep learning (Pytorch), visualization (Plotly), knowledge graphs, NLP-topic modeling

**R:** Machine learning, statistics, visualization (ggplot)

**Cloud Services:** AWS, AZURE, GCP, etc

**Miscellaneous:** C, C++, Julia, SQL, NoSQL, Project Management, Product management, etc.

### *DATA SCIENCE PORTFOLIO*

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#### **Semi-supervised learning with GANs**

(<https://www.kdnuggets.com/2020/01/semi-supervised-learning-generative-adversarial-networks.html>)

- Implemented SGANs in Pytorch
- Achieved a prediction accuracy of 98% for a 50% poorly labelled or unlabeled dataset

#### **Predicting Stock market trading**

(<https://aisc.ai.science/super-blog/rl-2019>)

- Implemented reinforcement learning actor-critic policy in Pytorch
- Compared performance of deep learning models such as RNN, attention and transformer models

#### **Recommender System using transformers**

([https://docs.google.com/document/d/15Y05HjXij8swYfayRBQeK9EL4BkUN5Jp\\_9IXkkaQ97E/edit#](https://docs.google.com/document/d/15Y05HjXij8swYfayRBQeK9EL4BkUN5Jp_9IXkkaQ97E/edit#))

- Critical review paper on BERT4Recsys recommendation system
- Strength and weakness of implementing transformer architecture for recommendation systems

#### **NLP-Topic Modeling of Twitter Data**

(<https://github.com/tryambak2019/NLP-Topic-Modeling>)

- Scrape internet for twitter data
- LDA modeling to evaluate tweet topics

#### **Toronto House Price Prediction**

(<https://github.com/tryambak2019/AirBnB-Housing-Prediction>)

- Use of AirBnB Data to evaluate Toronto Housing Market
- Comparison of linear regression, light gradient boosting method, and deep learning with Pytorch for predicting housing market

**PROFESSIONAL EXPERIENCE**


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<b>Engineer</b> <i>Arcadis Canada Inc., Richmond Hill, ON, Canada</i>	<i>March 2018 – contd.</i>
<b>Senior Design Engineer</b> <i>Infrastructure Technologies, NOIDA, India</i>	<i>Aug. 2016 – March 2018</i>
<b>Technical Professional</b> <i>Wood plc, Charlotte, NC, USA</i>	<i>Feb. 2015 – June 2016</i>
<b>Research Assistant</b> <i>The University of North Carolina, Charlotte, NC, USA</i>	<i>Jan. 2014 – Jan. 2015</i>
<b>Research Assistant</b> <i>Michigan State University, East Lansing, MI, USA</i>	<i>Aug. 2009 – Dec. 2013</i>
<b>Assistant Manager</b> <i>Ircon International Ltd., Kuala Lumpur, Malaysia</i>	<i>July 2007 – Aug. 2009</i>

**EDUCATION**


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Ph.D., Civil Engineering, Michigan State University, East Lansing, Michigan, USA (August 2014)
M.S., Civil Engineering, Michigan State University, East Lansing, Michigan, USA (May 2013)
M.Tech., Civil Engineering, Indian Institute of Technology, New Delhi, India (May 2007)
B.Tech., Civil Engineering, National Institute of Technology, West Bengal, India (May 2005)