

ANMOL MAHAJAN

mahajan@ualberta.ca ◇ 587-937-5606 ◇ <https://anmolmahajan98.github.io>
www.linkedin.com/in/anmol-mahajan-338605157/

HIGHLIGHTS OF SKILLS

- Research intern working towards analysing financial behaviour of people and developing behaviour-oriented machine learning prediction models.
- 1 year of research experience in combined domains of Machine Learning, Deep Learning and Data Science currently in my Master's thesis research.
- Advanced technical skills using Python, Keras, PyTorch, NumPy and Pandas.

EDUCATION

MSc. in Computing Science University of Alberta, Edmonton AB Overall GPA: (3.9/4.0)	2019-2021
BTech. in Computer Science and Engineering with Honors Jaypee University of Information Technology, India Overall CGPA: (9.0/10.0)	2015-2019

WORK EXPERIENCE

AI Research Intern <i>Servus Credit Union, Edmonton AB</i>	May 2020 - Present
<ul style="list-style-type: none">· Designing unique Machine Learning methods to provide individual-tailored future solutions and human behaviour modelling.· Analysing financial behaviour of hundred of individuals using different Data Science techniques for better user oriented predictions.	
Graduate Research Fellow <i>University of Alberta, Edmonton AB</i>	May 2020 - Present
<ul style="list-style-type: none">· Exploring Machine Learning and Deep Learning methods to tackle the problem of using AI in real world tasks involving data scarcity.· Developing new methods to achieve SoTA results using limited pre-existing knowledge in comparison with existing naive Machine Learning methods.	
Graduate Teaching Assistant <i>University of Alberta, Edmonton AB</i>	September 2019 - Present
<ul style="list-style-type: none">· Responsibilities involve grading assignments and exam papers of the students along with assisting students with their doubts regarding the course topics in weekly labs.· Courses : Computer and Games, Computer Networks, Computer Organization and Architecture.	
Summer Research Intern <i>Indian Statistical Institute, Kolkata, India</i>	May 2018 - August 2018
<ul style="list-style-type: none">· Worked with Dr. Subhamoy Maitra in Network Security and Cryptography.· Developed Time Memory Data Trade Off Attack (TMDTO) on Data Encryption Standard (DES) and Triple Data Encryption Standard (3-DES).	

PERSONAL PROJECTS

Explainable AI in Knowledge Graphs (KGXAI)

January 2020 - April 2020

Python, Pandas, NumPy

- Rule mining from Knowledge graphs using evolutionary algorithm as a part of explainable AI.
- Determined meaningful rules with better efficiency (improved fitness scores) and time performance.

Breast Cancer Classification on BreakHisv2

September 2019 - December 2019

Python, PyTorch, Fast.AI

- One Cycle Policy for optimum learning rate along with transfer learning and fine-tuning for Breast Cancer Classification on BreakHisv2 dataset.
- Outperformed baseline Resnet50 training by 10% increase in overall accuracy.
- Improved time efficiency in comparison with baseline approach by more than 50%.

Breast Cancer Classification: Comparison

September 2019 - December 2019

Python, Pandas, Scikit-learn, Matplotlib

- In-depth analysis of Logistic regression, k-nearest neighbour and Support Vector Machine on Breast Cancer Wisconsin (Diagnostic) Data set.
- Designed experiments using PCA, Analysis of Variance (Anova) F test and Chi Square test.
- Evaluated using Precision, Recall, F1-score, ROC probability curves and Confusion matrices.

PUBLICATIONS

Image-to-Level: Generation and Repair

2020

Artificial Intelligence and Interactive Digital Entertainment (AIIDE)

- Proposes the use of images as the input for a Procedural Content Generation via Machine Learning (PCGML) process to generate game levels with high fidelity.

SELECTED ACHIEVEMENTS

MITACS Accelerate Research Funding

May 2020 - Present

MITACS, Servus Credit Union (\$30000)

- Awarded research funding for partnering up my Master's thesis research work with Servus Credit Union and work towards providing solutions within similar area of interest.

ACM-JUIT Chairperson

August 2018 - February 2019

ACM-JUIT Student Chapter, India

- Served as the Chairperson of ACM (Association for Computing Machinery)-JUIT Student Chapter during my Bachelor's.

TECHNICAL STRENGTHS

Programming Languages

C, C++14, Java, Python

Frameworks

PyTorch, Keras, Fast.AI

Libraries

NumPy, Pandas, SciPy, Scikit-learn, Matplotlib

Utilities

Google Colab, Jupyter Notebook, Google Cloud, Anaconda