# TIFFANY MAYNARD

tiffany _._ maynard _@_ gmail.com

## EDUCATION

Honours Bachelor of Science - Computer Science (French Immersion Stream)          May 2021
University of Ottawa  Ottawa ON
  • Honours Project: Puzzle Boon - Jigsaw Puzzle Assist

Honours Bachelor of Mathematics - Actuarial Science (Co-op)          May 2001
University of Waterloo  Waterloo ON

## AWARDS

  • Cognos Prize for top fourth year Honours Project in Computer Science
  • Summa Cum Laude (University of Ottawa)
  • Merit Scholarship (Dean's Honours List)          Fall 2018 – Winter 2021
  • Second Language Certificate in French

## RESEARCH EXPERIENCE

**Honours Project** University of Ottawa          Winter 2021
  • Evaluated computer vision techniques to best isolate puzzle pieces from their backgrounds
  • Compiled and labelled images of puzzle pieces for ML model dataset using COCO format
  • Implemented a model to detect puzzle pieces using transfer learning (Detectron2 Mask RCNN model in PyTorch)
  • Met bi-weekly with supervisor to discuss progress
  • Presented results via oral presentation to peers and written project report

**Various Research Projects** University of Ottawa          Fall 2019 - Winter 2020
  Introduction to Artificial Intelligence (CSI4106)
  • Evaluated different approaches to classifying text posts to their corresponding subreddit
  • Implemented a classifier using Universal Language Model Fine-tuning (ULMFiT) with fastai
  • Co-wrote report analyzing and comparing results from the 3 different approaches
  • Presented results of analysis to peers

  Fundamentals of Data Science (CSI4142)
  • Analyzed crime statistics for two jurisdictions using multiple data sources
  • Designed data structure (fact table and dimensions)
  • Formatted and cleaned data sources using pandas in Jupyter Notebooks
  • Loaded clean data into PostgreSQL database and analyzed using queries
  • Presented results to teaching assistant

**RESEARCH EXPERIENCE (continued)**

Design of Secure Computer Systems (CSI4539)
- Analyzed and compiled information about the Twitter Hack on July 15, 2020
- Presented analysis via online discussion with professor and in a written report

Topics in Artificial Intelligence - Semantic Web (CSI5180)
- Researched Open Graph Protocol (Including Metadata in the Current Web)
- Presented topic overview to peers

**RELEVANT WORK EXPERIENCE**

**Junior Officer (FSWEP Student)** Canada Border Services Agency          May 2019 – February 2020
Ottawa ON
- Reviewed existing literature on x-ray object detection and summarized to laypeople
- Implemented a fastai deep learning model for an x-ray object detection proof of concept
- Worked with my team on validating data for a blockchain proof of concept

**FSWEP Student** Courts Administration Service          June 2018 – February 2019
Ottawa ON
- Created a web tool using JavaScript and jQuery to allow self-appointed litigants to provide the information required to generate Federal Court forms in pdf format

**Custom Access Database Developer** Sole Proprietor          July 2003 – December 2016
Toronto ON and Hamilton ON
- Produced custom MS Access applications to:
  - support third party administration services for a not-for-profit group insurance trust
  - provide donations management functionality for a not-for-profit organization
  - track study participants in a longitudinal childhood autism study

**SKILLS**

Computer: Proficient in Python, Microsoft Office (including Excel, Access, VBA)
          Familiar with JavaScript, HTML/CSS, Go, LaTeX, Jupyter Notebooks, R, NumPy, pandas, OpenCV, OpenOffice, Linux, Racket (Lisp), PostgreSQL, Prolog, Java, C/C++

Language: Native proficiency in English · Intermediate proficiency in French

## REFERENCES

Caroline Barrière
Assistant Professor, École de science informatique et de génie électrique
Relationship: Professor
University of Ottawa
800 King Edward (5062)
Ottawa, ON, Canada K1N 6N5

Miguel Garzon
Faculty Member, Faculty of Engineering
Relationship: Professor
University of Ottawa
800 King Edward (5026B)
Ottawa, ON, Canada K1N 6N5

Wonsook Lee
Full Professor, École de science informatique et de génie électrique
Relationship: Honours Project Supervisor
University of Ottawa
161 Louis Pasteur (A-509)
Ottawa, ON, Canada K1N 6N5