# Indumini Jayakody

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### EDUCATION

Carleton University

Ottawa

B.Cog.Sc Cognitive Science, Minor Computer Science - GPA: 3.9/4.0

September 2018 - April 2022

Concentration in Neuroscience (Biological Foundations)

Relevant Coursework: Abstract Data Structures/Algorithms, Discrete Mathematics, Artificial Intelligence, Systems Programming, Operating Systems, Neuroscience Data Analysis, Database Management Systems, Machine Learning, Cognitive Science and AI

SKILLS

Programming Languages: Java, Python, C, C++, HTML, JavaScript, TypeScript, SQL

Tools: PostgreSQL, Linux, Git, Dynamics365, Angular, WEKA, SPSS,

MATLAB, JIRA, Confluence

Libraries/Frameworks: Numpy, Pandas, Scipy, Sklearn, OpenCV, TensorFlow, PyTorch

Subjects: Machine Learning, Deep Learning, Neural Networks, Computer Vision,

Basic Networking Principles (TCP/UDP), ANOVA, Hypothesis Testing,

Statistics, Linguistics (Language processing), Neuroscience

EXPERIENCE

### Government of Canada

Ottawa - Remote

Data Scientist - Intern

May 2021 - Aug 2021

- Trained JohnSnowLabs Sentiment Analysis model (87% accuracy) and researched other models (HuggingFace, VADER, TextBlob, Flair)
  - pandas, numpy, pyspark, sparknlp, matplotlib, sklearn
- Explored and replicated studies/research in Sentiment Analysis
- Data pre-processing/cleaning, creating sample datasets, implementing model with Spark
- Observed model performance using Multi-class Classification Metrics (Precision, Recall, F1-Score), and confusion matrices
- Presented results to technical peers, product owners, analysts as well as non-technical audiences

# Carleton University

Ottawa - Remote

Teaching Assistant - Symbolic Logic course

June 2021 - Aug 2021

• Held office hours to help students understand course material and graded assignments and exams

### Government of Canada

Ottawa - Remote

Data Scientist - Intern

Sept 2020 - Dec 2020

- Developed data visualization tools using plotlyJS with Angular (SQL, Livy)
- Analyzed and documented program maintenance metrics
- Attended stand ups, weekly SCRUM meetings, tracked tasks on JIRA

# Government of Canada

Ottawa - Remote

UX/UI Developer - Intern

May 2020 - Sept 2020

- Helped develop service gateway portal using MS Dynamics 365 CRM
- Created business workflow and user stories/journeys
- Designed mock-ups and wire frames for effective user interface using Balsamiq

# NeurAlbertaTech (Volunteer)

Ottawa - Remote

Full Stack Developer

June 2021 - Sept 2021

- Worked on NeurAlbertaTech's Bermuda project, and assisted with developing Eye Tracking software (https://natuab.ca/project/bermuda)
- Used Asana to track progress
  - -detector3d, pye3d, pEyeTracker

# Project - NLP Text Classification (Python)

Current

- Implement Bernoulli Naive Bayes classifier with Laplace Smoothing from scratch (without any libraries)
- Experiment with various methods of text vectorization, classifiers and pre-processing for optimal accuracy
- Clean/process data with Exploratory Data Analysis (EDA)
- Train and test model to achieve best accuracy
- Examine performance of model (Accuracy, ROC-curves, Runtime)
- Develop models /classifiers to analyze text from reddit and given a post/comment, the model predicts the subreddit it came from.

## Project - Logistic Regression and K-Folds (Python)

September 2021

- Implemented Logistic Regression model and K-Fold validation from scratch (without any libraries)
- Performed Exploratory Data Analysis on Parkinson's dataset (180+ samples, 57 features) and Stocks dataset (1400+ samples, 155 features)
- Performed Feature Engineering (One-Hot Encoding, Explored outliers, Applied Variable Transformations log, square root transformations, Numerical Imputation)
- Utilized online real time collaboration platform Deepnote while updating progress on GitHub

## Computer Vision Project - Real Time Hand Tracking (Python)

September 2021

- Created a hand tracking module and program that captures hand/fingers
  - openCV, mediapipe, numpy
- Program displays a green coloured layer over video feed when there is a thumbs-up motion detected, and a red colour when thumbs-down is detected.

### Courses/Certifications

Introduction to Cloud Computing on AWS for Beginners - DigitalCloud Training	Current
AI for Medical Diagnosis - DeepLearning.ai (Coursera)	Current
Machine Learning - Stanford (Coursera)	Current
Computer Vision - Image Basics with OpenCV and Python - Coursera	Sept 2021
$\mathbf{IBM} \ \mathbf{Exploratory} \ \mathbf{Data} \ \mathbf{Analysis} \ \mathbf{for} \ \mathbf{Machine} \ \mathbf{Learning} \ \text{-} \ \mathbf{IBM} \ (\mathbf{Coursera})$	${\bf Sept~2021}$
Getting Started with Deep Learning - NVIDIA	July 2021
Intro to Machine Learning - Kaggle	April 2021