Amardeep Sarang

Computer Science Professional

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General skills

- ✓ Fluent speaker of Hindi and Punjabi
- ✓ Leadership
- ✓ Communication
- ✓ Time management
- ✓ Collaboration
- ✓ MS Office – including excel macros & VBA

Technical skills

Programing languages: Python, Java, JavaScript, HTML/CSS, PHP, C/C++, SQL.

Areas of experience:

- ✓ Strong background in machine learning classification, clustering, and reinforcement learning algorithms.
- ✓ Skilled at document processing, subject and sentiment analysis.
- ✓ Experience with image processing, object detection, and optical character recognition algorithms.
- ✓ Knowledgeable in the concepts of neural networks and related libraries (TensorFlow and PyTorch).
- ✓ Skilled at implementing artificial intelligence search and CSP algorithms.
- ✓ Have created SQL databases

Summary

A motivated and hardworking individual who has recently completed a computer science master's degree at the University of Waterloo. Looking to join the workforce as a computer science professional. Eager to utilize leadership, communication, and problem-solving skills. Passionate in the areas of data science, AI, and security.

Education

Jan. 2021 – April. 2022: *MMath. Degree in Computer Science*
University of Waterloo, Waterloo, ON
Relevant coursework:

- Computer Vision
- Reinforcement Learning
- Human-Comp. Interaction
- Affective Computing
- Cryptography/Network Security

Sept. 2016 – Dec. 2020: *BSc. Honors Degree in Computer Science*
Wilfrid Laurier University, Waterloo, ON
Relevant coursework:

- Intro to Artificial Intelligence
- Machine Learning
- Data Mining
- Image Processing

Achievements:

- Graduated with high distinction by achieving a GPA of 11.11 (out of 12)

Project experience

Object Detection and Testing - Generating Synthetic Winter Images

Summary: Created a framework called AutoSnow for generating synthetic winter image data from clear weather datasets. I used these synthetic images to test object detection models trained on clear weather data and compared the performance with real winter data.

Languages and libraries used: Python, Numpy, OpenCV, Pytorch, YOLOv5
Key skills and algorithms used: efficient image transformation, training, and testing object detection models

Extracting Aspect-Based Emotions from Online Product Reviews

Summary: Created AAMER, a method for aspect-based emotion analysis of product reviews. AAMER is a rule-based text mining approach to extract customer emotions towards aspects of a product from the product's reviews on Amazon. The method then displays the emotions toward each aspect in an interpretable manner.

Languages and libraries used: Python, Numpy, NLTK, Scapy
Key skills and algorithms used: Stop word removal, part of speech (POS) tagging, sentiment extraction, data visualization

Exposure Website Project

Summary: Created Exposure, a prototype for an image sharing website targeted at people who enjoy creative and inspiring photography as well as people who have a passion for editing such photos.

Languages and libraries used: HTML, CSS, MySQL, PHP
Key skills and algorithms used: Full-stack web development. Front end design in HTML and CSS. Backend server programming with PHP and database implementation with MySQL.