Aditya Parmar

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EDUCATION

UMASS AMHERST

M.S, Computer Science
Expected December 2020
Cum. GPA: 4.00

B.S, Computer Science
B.S, Mathematics
September 2015 - May 2019

HONORS

HACKUMASS

Won the award for best business idea from 900+ participants

OPTUM HACKATHON

Placed 3rd among 182 teams at the Optum international hackathon

COURSEWORK

COMPUTER SCIENCE

Graduate:
Wearable Mobile Sensors
Tutoring Systems

Undergraduate:
Machine Learning
Artificial Intelligence
Computer Vision
Algorithms
Software Engineering

MATHEMATICS

Linear Algebra
Multivariable Calculus
Statistics
Combinatorics & Graph Theory
Ordinary Differential Equations

SKILLS

LANGUAGES

Python • R • Java • PHP • React
SQL •MATLAB • C • HTML/CSS

TOOLS/FRAMEWORKS

Scikit-Learn • NumPy • Pandas
TensorFlow • ReactJS • Jupyter Notebooks

EXPERIENCE

WAYFAIR | Software Engineering Intern

June 2019 – August 2019 | Boston, MA

- Improved how packages are prioritized for delivery between warehouses in the Wayfair Delivery Network by moving from a First In First Out (FIFO) method to calculating priority scores for packages.
- Created a user interface to provide insight to business users on the algorithm used to calculate package priority scores, along with a breakdown of what the scores meant and how they improved delivery times.
- Skills used: PHP, SQL, React

AIR FORCE RESEARCH LAB | Research Intern - Machine Learning

June 2018 – August 2018 | Rome, NY

- Built a convolutional neural network (CNN) to classify classes not in a training set for possible uses in drone object detection.
- Designed virtual environments in Unity and Unreal Engine to test the accuracy of reinforcement learning algorithms on drones.
- Skills used: Python, Scikit-Learn, TensorFlow

OPTUM UNITEDHEALTH GROUP | Machine Learning Intern

June 2017 – August 2017 | Boston, MA

- Collaborated in an Agile environment to use a machine learning and big data approach to predict sections of medical claims with an accuracy of 88%.
- Estimated to save the company over $1 million through using this algorithm instead of manual work.
- Skills used: R, Hadoop, Hive, Python, Tableau, Jupyter Notebooks

RESEARCH

PHYSICAL ACTIVITY & HEALTH | Graduate Researcher

September 2018 – Present | Amherst, MA

- Utilizing data from accelerometers to predict the resistance training (RT) a user was performing through several machine learning models such as a neural network, SVM, KNN model, random forest and gradient boosted tree.
- Achieved a true positive classification rate of 75.1% on 29 RT exercises, 90.3% true positive accuracy on joints used during RT exercises, and an 81.9% true positive accuracy on muscle groups used during RT exercises.

BINDS | Undergraduate Researcher

September 2017 – August 2019 | Amherst, MA

- Predicted the type of palliative treatment to provide patients in hospice care given the patient's medical information using machine learning models.
- Thesis: Predicting Palliative Treatments for Hospice Care Patients

PROJECTS

OPTUM | Optum Personal Health Assistant

July 2017 | Boston, MA

- Transformed a Google Home device into a personal health assistant that recommends diet and fitness advise to users, accompanied with a website and mobile app to display a user's information