

Saif Ryan Vishal Gangaram

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EDUCATION

UNIVERSITY AT BUFFALO, THE STATE UNIVERSITY OF NEW YORK | Institute for AI and Data Science
Masters of Professional Studies in Data Sciences & Applications | GPA: 3.67/4.0

Buffalo, NY
Expected: Aug 2023

UNIVERSITY AT BUFFALO, THE STATE UNIVERSITY OF NEW YORK | College of Arts & Sciences
Bachelor of Arts in Mathematics w/ a concentration in: Computing & Applied Mathematics

Buffalo, NY
Conferred: February 2021

RELEVANT COURSEWORK:

Statistical Data Mining 1&2, Machine Learning, Probability & Statistics, Numerical Analysis, Python Programming, Advanced Algorithms, Database Management Systems, Calculus 1&2&3, Multivariable Calculus, Linear Algebra, Differential Equations, Partial Differential Equations, Mathematical Finance, Complex Systems, Programming 1&2, Data Structures, Discrete Structures, Computer Org & Arch, Software Engineering, Computer Vision & Image Processing, Bayesian Networks, Time Series Analysis

WORK EXPERIENCE

Alpha Kappa Psi Beta Iota Chapter

Member

Buffalo, New York

May 2018 - Current

Vice President of Professional Development

May 2019 - May 2020

- Realized and shaped the thought process of future business leaders by co-hosting 10+ workshops and leading recruitment meetings
- Responsible for the organization of 20+ professional, service, and unity events in order to ensure stability and utility of the chapter
- Oversaw the largest chapter of Alpha Kappa Psi in the eastern Great Lakes region and was partially responsible for 85+ members
- Developed soft skills needed for working with 7 other Executive Board members such as planning, public speaking and decision making

School of Engineering and Applied Sciences at the University at Buffalo

Buffalo, New York

Teacher's Assistant

January 2019 – January 2020

- Responsible for the prompt instruction of 2 Lab classes and 1 Recitation (per week) for a CS course and supervised over 45+ students
- Tasked with grading and inputting homework, labs, and test scores twice a week and graded 90+ homework assignments and labs per week
- Aided with the administration of 3 exams and 5 quizzes per semester and was occasionally tasked with teaching lecture with 1 other TA

HungerPass (iPhone and Android Application)

Manhattan, New York

Social Media Marketing/Data Analytics Intern

June 2018 – August 2018

- Grew the application by 23% by inventing clever methods to obtain new customers via social media such as linking IG accounts to the app
- Innovated new methods to exploit the Instagram algorithm such as using new features in each update to boost Hungerpass' relevancy
- Worked in teams of 3-4 to devise custom marketing material for the company such as video, photos, and presentations for management

PROJECTS

COMPUTER VISION PROJECT

Buffalo, New York

Real-Time Human Emotion Recognition System

March 2023 - May 2023

- Developed a real-time human emotion recognition system using deep learning techniques and real-time video processing
- Preprocessed and augmented AffectNet and FER2013 dssets w/ over 40,000 images, procured model robustness in various lighting conditions
- Fine-tuned convolutional neural network (CNN) architecture, optimizing hyperparameters (learning rate, batch size, epochs) and experimenting with advanced feature extraction methods (LBP, HOG)
- Incorporated early stopping, dropout (up to 50% rate), and gradient clipping techniques to prevent overfitting and stabilize model training

STATISTICAL DATA MINING PROJECT

Buffalo, New York

Breast Cancer Project (Linear Regression/Classification/PCA/PCR/LAR & Clustering w/ Error Analysis)

October 2022 – December 2022

- Coerced Breast Cancer Data to predict radius_worst using machine learning models, classified Malignant and Benign tumors
- Utilized SQL, R and Python's numpy and pandas to design multiple regression/classification/p. components models to predict radius etc.
- Scaled and manipulated 10+ large data frames of time-series data, created local database repo – wrote and performed acceptance tests

SOFTWARE ENGINEERING PROJECT

Buffalo, New York

Quantitative Finance Project

August 2020 – December 2020

- Leveraged real core financial data from Quandl's API (S&P 500) to build portfolio objects and execute Markowitz portfolio optimization
- Worked with Python's numpy and pandas to design multiple classes and functions to compute sharpe, sortino, and other ratios for investors

NUMERICAL ANALYSIS PROJECT

Buffalo, New York

SARS-Cov-2 SIR & SIRN Models (COVID-19)

October 2019 – December 2019

- Used real US government COVID infection and mortality data (8 Data Sets) to predict the spread of COVID-19 with an SIR model
- Calculated the spread of infection and mortality of infection by leveraging Forward Euler Integration by county and performed error analysis

SKILLS & CERTIFICATIONS

Udemy Certifications: Introduction to Python, Advanced Data Science in Python, PostGRE SQL, Investment Banking, Python for Financial Analysis & Algorithmic Trading, Introduction to R, Ethical Hacking || **Technical Skills:** Proficient in Python, R, SQL, C++, Java, Javascript, Scala, Julia, Verilog, Google BigQuery, Word, Excel, Access, Github, and Powerpoint