HARSHAD BARAPATRE

LinkedIn | GitHub | Buffalo, NY 14216

EDUCATION

University at Buffalo, the State University of New York **Aug 2021 – Aug 2022**
Master of Science in Computer Science and Engineering CGPA: 3.84/4

CodePath **Jan 2022 – May 2022**
Certificate in iOS Development Score: 100%

MCT's Rajiv Gandhi Institute of Technology, University of Mumbai **Aug 2017 – Jun 2021**
Bachelor of Engineering in Information Technology CGPA: 8.59/10

SKILLS

Programming Languages: Python, Swift, R, and Java
Libraries: TensorFlow, Keras, PyTorch, Flask, OpenAI Gym, MPI, NLTK, and CocoaPods
Cloud: GCP and AWS
Tools: Git, Postman, SLURM, KNIME, and Apache Solr.

PROFESSIONAL EXPERIENCE

School of Engineering and Applied Sciences, University at Buffalo **Apr 2022 – Present**
Graduate Student Ambassador

- Engaged and interacted with prospective students to assist and answer their questions with regards to the university, student life, and academics on behalf of the Office of Graduate Education.
- Provided outstanding student service by demonstrating core values of leadership and professionalism.
- Participated in student forums and discussion panels to increase enrollment and student participation by 25%.

SELECTED PROJECTS

JellyClub, CodePath (GitHub) **Feb 2022 – May 2022**
Tech Stack - Swift, CocoaPods, Web API, Postman, Git, Xcode

- Developed an iOS application for a social network for music enthusiasts and deployed it on TestFlight.
- Used iTunes Search API to fetch tracks and related information including previews, various Cocoapods to implement functionalities, and Back4App to handle the back-end database system.

Tridiagonal Systems of Linear Equations Solver, University at Buffalo (GitHub) **Feb 2022 – Apr 2022**
Tech Stack – Python, MPI, SLURM, Git, CLI

- Implemented a parallel prefix product algorithm using MPI on a cluster in collaboration with the Center for Computational Research, University at Buffalo.
- Improved the running time of the algorithm by a factor of 50% in each iterative execution by increasing the number of specifically configured nodes as compared to the sequential algorithm.

Ad-hoc Comparison of Reinforcement Learning Algorithms, University at Buffalo **Oct 2021 – Present**
Tech Stack – Python, TensorFlow, Keras, PyTorch, Numpy, OpenAI Gym

- Implemented Deep Q-Networks and Actor-Critic methods on multiple Atari environments by utilizing custom CNN structures and reward functions to speed up training by 40% compared to naïve implementations.
- Solved GymRobotics environments using decentralized and distributed reinforcement learning algorithms.

HATS Search and Sentiment Analysis of Twitter Data, University at Buffalo (GitHub) **Oct 2021 – Dec 2021**
Tech Stack – Python, AWS, Apache Solr, Flask, TensorFlow, NLTK, Git, Postman

- Collected more than 150,000 tweets related to COVID-19 and vaccines in multiple languages using the Twitter API and indexed them in Apache Solr on an AWS EC2 instance.
- Implemented the backend of a web application using Flask to enabling multi-keyword queries and designed filters and pagination to streamline the results to increase efficiency by 74%.
- Developed an API to facilitate search and support a dashboard for graphical representations of the entire corpus.

CERTIFICATIONS

- Google Cloud Ready Facilitator Program, Google Cloud, QwikLabs
- PH125.8x: Data Science: Machine Learning, Harvard University, edX
- Data Science Foundations (V2) and Applied Data Science with Python, IBM

LEADERSHIP

Association of Budding Information Technocrats (ABIT-RGIT) **Sept 2020 – Sept 2021**
President

- Managed a committee of 100+ students divided in technical, logistics, event management and marketing teams.
- Led a marketing team and successfully raised $700, an increase of 40% compared to the previous academic year.
- Organized 9 seminars and workshops helping over 500 students improve their skills across various fields.