

Shraddha Shekhar

+1 716-994-5448 | iamshraddhashekhar@gmail.com | www.linkedin.com/in/shraddha-shekhar/ | **Portfolio**

EDUCATION

University at Buffalo, The State University of New York Master of Science in Computer Science and Engineering Courses: Natural Lang Processing, Information Retrieval, Reinforcement Learning, ML	Aug 2022 - Dec 2023 GPA: 3.91/4.00
Savitribai Phule Pune University Bachelor of Engineering in Computer Engineering Courses: Data Structures, Computer Architecture, Computer Networks, Operating Systems	Aug 2017 - July 2021 GPA: 9.32/10

TECHNICAL SKILLS

Languages: Python, C++, C, Java, GoLang, SQL, JavaScript, HTML/CSS
Libraries and Frameworks: Numpy, Pandas, NLTK, Keras, Tensorflow 2, Pytorch, HuggingFace, BERT, Word2vec, Gym, Gymnasium, Scikit-Learn, Matplotlib, Dash, Flask, Django, Spring Boot.
Software and Databases: Git, Jupyter Notebook, Tableau, Power BI, MySQL, Linux, Mongo DB, PostgreSQL, Oracle, Elasticsearch, Kibana, Apache Solr, GCP.

WORK EXPERIENCE

Research Assistant University at Buffalo Buffalo, New York <ul style="list-style-type: none">Developed a dynamic Flask web application designed for RL course to demonstrate intricate workings of RL algorithms, Q-Learning, SARSA, Double DQN, to solve a custom environment.The app's intuitive functionality empowers students to gain a deeper understanding of RL concepts by engaging with visual representations of algorithm behaviors and effect of various parameters on the agent's learning process.	Jan 2023 – May 2023
Software Development Engineer Persistent Systems Pune, India <ul style="list-style-type: none">Worked on a project in collaboration with the Government of India, driving website traffic analysis and improving security through predictive identification of malicious actions.Architected and developed a robust Data Simulator (Secure Data Lake) to conduct load testing, resulting in 97% data integrity rate.Collaborated with red team to execute Adversary Emulation, enabling simulation of diverse environments and resulting in a 20% improvement in threat mitigation strategies.Researched on Lateral Movement and User Behavior, leading to integration of these insights into simulations.Contributed to open-source community by augmenting the Wazuh agent-simulator with 6 new features expanding it's functionalities and making it robust.	May 2021 – July 2022
Data Science and Python Intern Verzeo Pune, India <ul style="list-style-type: none">Data Preprocessing, Feature engineering and visualizing the analyzed insights using responsive dashboards.Employed machine learning algorithms to perform Market Basket Analysis and Inventory Management for a local commercial business.	Dec 2020 – Mar 2021
Web Development Intern The Digital Tantra Pune, India <ul style="list-style-type: none">Designed and built entire website for The Digital Tantra from scratch.Devised a user-friendly and responsive website, leading to a 32% increase in user engagement and site traffic.	Mar 2020 – May 2020

PROJECTS

Multi-topic Generative and Information Retrieval Chatbot GPT2, LLMs, NLP, Tensorflow, GCP, Flask <ul style="list-style-type: none">Spearheaded development of a chatbot utilizing strengths of GPT2, RoBerta and information retrieval techniques to generate response capable of efficiently holding a general and topic specific conversation.Fine-tuned GPT2 with NER tags and Sentiment Analysis to generate empathetic responses.Leveraged BERT and RoBerta to enhance generation of factual responses using indexed documents on Apache Solr and sentence transformer.Deployed a flask app for the chatbot on Google Cloud Platform.
Natural Language sentence to SQL query conversion using Deep Learning and Artificial Intelligence TF <ul style="list-style-type: none">Built Deep Learning models using LSTM, Encoding, Vector Embedding and and incorporated fundamental Artificial Intelligence techniques and NLP for smart choices.Integrated all modules of project and created a user-friendly frontend using Dash (python).Published a research paper on the approach and efficacy in an international journal, Journal of Emerging Technologies and Innovative Research.(http://www.jetir.org/papers/JETIR2106077.pdf)
Solving Multi-Agent environment using Deep Reinforcement Learning Algorithms Pytorch, Gym <ul style="list-style-type: none">Solved multi-agent gym environment, Checkers and custom grid world, by implementing complex deep RL algorithms such as DQN, Double DQN, Actor-Critic.

CO-CURRICULAR & ACHIEVEMENTS

Awards: Received the prestigious Peer's Choice Award, acknowledging outstanding dedication and effectiveness in delivering educational support as a TA.
Graduate Teaching Assistant: CSE 546-Reinforcement Learning (Spring 2023), CSE 574-Intro to Machine Learning (Summer 2023, Fall 2023)