KARTIKE CHAURASIA

(716)907-3496 | kartikec@buffalo.edu | LinkedIn : Kartike | Github : Kartike | Portfolio : Kartike

EDUCATION

University at Buffalo, The State University of New York ***Anticipated December 2023***

Bachelor of Science in Computer Science Concentration in Artificial Intelligence **GPA: 3.80/4.00**

- Tau Beta Pi - Engineering Honors Society
- David M. Benenson Memorial Scholarship
- 2022 Leaders in Excellence Award
- 2023 Innovative Student Leader Award

SKILLS

Technical: Java, Scala, JavaScript, Python, C, Go, HTML5, CSS3, ReactJS, MongoDB, MySQL, PostgreSQL, Git, Version Control, Docker, TCP/IP, jQuery, Bootstrap, RESTful API, SASS, AJAX, Flask, FastAPI, Gin, Kubernetes, NodeJS, NumPy, TensorFlow, AWS, Azure

Computer Science Concepts: Computer Vision, Machine Learning, Distributed Systems, Software Engineering, Web Applications, Algorithms, Data Structures, Systems Programming, Object-Oriented Programming, Database Systems, Cloud Computing

WORK EXPERIENCE

Head Teaching Assistant (Data Structures & Algorithms), *University at Buffalo* ***August 2022 – Present***

- Conduct reviews weekly, **debugging and troubleshooting** assistance in **Scala and Java** for almost 40 students
- Restructured all programming assignments from **Scala to Java**, and authored for **data structures and algorithms programming assignment documentation**, ensuring clarity of instructions and curriculum's relevance and accessibility
- Developed an automated testing system using **Python and Java**, which streamlined the evaluation process programming assignments, utilized **JSON** for test result storage, and integrated **Makefile** for build automation

Full Stack Web Developer (NEXT-LEVEL Leadership Conference), *University at Buffalo* ***August 2022 – Present***

- Develop a **Python based TCP Handler, MongoDB database, and an ADA-compliant front end** for the leadership conference
- Automate team point allocation through dynamic **login and registration system,** upon successful task completion
- Leverage **web sockets** to create a live, real-time scoreboard, reducing manual calculations and **workload by up to 90% compared to the prior conference**, initially joined as a volunteer and but transitioned to a part-time role based on performance and contributions

Software Engineering Intern, *Stark & Wayne LLC* ***June 2022 – August 2022***

- Engineered Genesis UI's **UI/UX**, a **Docker based framework** using BOSH for simplified multi-cloud deployment
- Worked within a team of 4 to streamline the **deployment, scaling, and upgrading of systems** like Cloud Foundry across multiple cloud infrastructures, enhancing **the security and efficiency of web application components**
- Developed backend APIs in **Golang** using **Gin web framework** to store, update deployments in **PostgreSQL** database container, adding functionalities using **ReactJS** and implemented seamless deployment data integration using **GitHub API**

PROJECTS

Stock Predictor, *Github Link* ***June 2023***

- Implemented a **Random Forest Regressor model** and utilized the **yfinance library** for data from **Yahoo Finance API**
- Optimized the Random Forest model using **GridSearchCV** for **hyperparameter tuning**, identifying the best parameters from given ranges for the **number of estimators, maximum features, minimum samples split, and bootstrap option**
- The model achieved a **Mean Absolute error of 0.975, Mean Squared Error of 1.763, and a Root Mean Squared Error of 1.328**, indicating a relatively **accurate performance** in predicting the stock closing prices

Handwritten Digit Classifier, *Github Link* ***March 2023***

- Developed a **Convolutional Neural Network (CNN)** in **PyTorch** to classify handwritten digits from the **MNIST dataset**, attaining an **accuracy of 99%** on the validation set
- Implemented **data augmentation, including random rotation**, to enhance model robustness and ability to generalize from training to unseen data
- Integrated a **Generative Adversarial Network (Generative AI Modelling)** to generate synthetic handwritten digits, further enhancing robustness, the generated digits were used in training cycles, contributing to the model's high accuracy

UBay E-commerce Website for University at Buffalo, *Github Link* ***December 2022***

- Led a team of 4 to develop an eCommerce platform for University at Buffalo stakeholders using **ReactJS, FastAPI Python-based framework, Sass for CSS, and PostgreSQL for the database using agile development techniques**
- Designed a secure user account authorization system employing **bcrypt** library and implemented session cookies
- Devised an auction feature **using web sockets** with real-time bid tracking for the highest bidder when an auction end

LEADERSHIP EXPERIENCE

Student Engagement Ambassador, *University at Buffalo* ***August 2021 – August 2023***

- Advise and mentor **12 - 20 students per semester** to help increase campus engagement and foster development

Resident Advisor, *University at Buffalo* ***August 2022 – Present***

- Oversee administrative tasks including budgeting, incident reports, and resident check-ins for a **dormitory of 200+ students**