KASHYAP BASTOLA

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EDUCATION

M.S in Computer Science, University of Florida, Gainesville, FL Aug 2023 - Present

- **GPA:3.66**
- Relevant Coursework: Advanced Data Structure, Distributed Operating Systems, Programming and Functions, Software Engineering, Human Computer Interaction

B. Tech in Computer Science Engineering, Vellore Institute of Technology, India Jul 2019 – Apr 2023

- **GPA: 3.6**
- Relevant Coursework: Data Structures Algorithms, Object Oriented Programming, Software Engineering, Artificial Intelligence, Machine Learning, Natural Language Processing, Image Processing, Computer Vision, Human Computer Interaction, Deep Learning

EXPERIENCE

Uniaxial Software Pvt. Ltd. | Machine Learning Intern Sep 2022 – Nov 2022

- Contributed to the development of an advanced Chatbot project focused on semantic analysis, where I successfully applied Natural Language Processing pre-processing techniques in conjunction with various Machine Learning Algorithms.
- Conducted an in-depth evaluation of candidate algorithms, including Recurrent Neural Network (RNN), Naïve Bayes, and Support Vector Machines, to determine the optimal solutions for the project's objectives.

Khudra Corporation Ltd. | Machine Learning Intern Dec 2021 – Feb 2022

- Engaged with the movie theatre management system team to integrate innovative AI-driven personalized advertising solutions, showcasing adaptability and applied AI technology proficiency.
- Collaborated on devising user-centric expansion strategies by leveraging machine learning techniques, effectively accommodating client preferences.

SKILLS

Java, Python, Django, JavaScript, TypeScript, React.js, Angular, NodeJS, CSS, Bootstrap, SQL, PostgreSQL, HTML, C++, Machine Learning, TensorFlow, PyTorch, Computer Vision, Natural Language Processing, Deep Learning, Neural Networks.

PROJECTS

Car Game with 3D Audio Integration

- Developed a car driving simulation using Python and Pygame, focusing on front-end design and integrating dynamic sound movement for a realistic user experience.
- Handled sound panning and object velocity for a smooth, immersive interface.

New Image Generation from Text using Generative AI, Shell Hacks Hackathon

- Worked on **MICROSOFT AI Challenge** and created a Generative AI model using Deep Convolution GANs where more than 1500 flower images were used as image data along with its corresponding text data.
- Worked on Front End using Django Framework, CSS, Bootstrap and JavaScript to make a display screen for the generated images.

Brain Computer Interface (BCI) for Eye State Detection using Tree Based Algorithm

- Eye state detection was performed using tree-based machine learning algorithms with brain signal data collected by electroencephalogram (EEG) headset. Preprocessing steps like bandpass filtering, Hilbert Transform and Z-Score normalization were used along with Recursive feature elimination and Bayesian Optimization.
- This project showcases my prowess in merging neuroscience and machine learning to create practical applications, highlighting my expertise in feature extraction, algorithm selection, and BCI technology.

Detection of Defective potato chips

- Implemented a robust machine learning solution using a diverse dataset comprising more than 1000 images encompassing both defective and non-defective chips. ML algorithms including Mobile Net, ResNet50, VGG16, and VGG19 were used to train the models.
- This project underscores my ability to effectively handle real-world datasets and employ advanced neural network architectures to solve practical problems.

Aspect Based Sentiment Classification Using Car Reviews

- Designed an intricate solution to perform aspect-based sentiment analysis, delving into a corpus of car reviews. Used methods including tokenization and lemmatization to prepare the textual data along with Latent Dirichlet Allocation (LDA) to unveil latent topics within the reviews.
- Used Support Vector Machine (SVM), Naïve Bayes which allowed me to categorize each aspect of the car reviews based on its polarity.

PUBLICATIONS

Self-Driving car using image processing and deep learning Feb 2022

Green manufacturing via machine learning enabled approaches Dec 2022

CERTIFICATIONS AND ACHIVEMENTS

- **Awarded Achievement award Scholarship** for outstanding students from University of Florida Aug 2023
- **Industrial Training on Machine Learning** from Finland Labs Jun 2022
- **Web Applications and Technologies using Django** from University of Michigan Mar 2022
- **Certificate of completion** for Data Structures and Algorithms with Python Oct 2021