

Bharadwaj Ketham

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in LinkedIn

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Education:

- **Master's in Computer Science (Pursuing)**
University of Central Missouri
Notable Courses: Data Structures and Algorithms, Operating Systems, Artificial Intelligence.
- **Bachelor of Technology in Electronics and Communications**
Vel Tech Rangarajan Dr. Sagunthala RD Institute of Science and Technology, Chennai, India

Skills and Activites:

- **Programming Languages:** Proficient in Python.
- **Machine Learning and Artificial Intelligence (AI):** Experience with traditional Machine Learning and Deep Learning.
- **Software Engineering:** Data Structures, Algorithms, and Object-Oriented Programming.
- **Data Science:** Web Scraping (Data Extraction from URL), Data Analysis, Image Processing.
- **Database Management:** Having basic knowledge on SQL.
- **Libraries and Frameworks:** Scikit-Learn, NumPy, Matplotlib, Pandas, Keras, TensorFlow, Beautiful Soup, Django.

Projects:

1. Traffic Signal Detection suing Yolo Algorithm (Technologies used: Machine Learning, Deep Learning, Python, OpenCV, TensorFlow, Computer Vision)

- Engineered a YOLO-based system for real-time traffic signal detection, training on 5,000+ images, leading to significant congestion reduction.
- Secured 80% prediction accuracy by leveraging Python, OpenCV, and TensorFlow in neural network development.
- Championed the implementation of computer vision methodologies with OpenCV that facilitated the identification of traffic signals in real-time, providing crucial data.
- Pioneered the deployment of an AI model tailored for autonomous vehicles, enhancing safety and reducing driver intervention by 40% during automated tests.

2. DEEP LEARNING BASED BEHAVIOUR MONITORING IN CLASSROOM (Machine Learning, Deep Learning, Python, OpenCV, TensorFlow, Computer Vision)

- Constructed a custom dataset from in-class facial data, improving behavior prediction accuracy by 25% and providing actionable insights for instructional optimization.
- Achieved 90% accuracy in student behavior detection, with the integration of smart attendance as a key feature.
- Constructed a cutting-edge behavior recognition model with OpenCV, analyzing user interactions in real-time; this initiative reduced error rates in facial detection by 25%, leading to a more reliable application performance.

3. ANALYSIS OF DEEP LEARNING BASED OPTIMIZATION TECHNIQUES FOR ORAL CANCER DETECTION (Deep Learning, Transform Techniques, Scikit-learn, TensorFlow, Computational Intelligence)

- Harnessed Python and Scikit-learn for data processing and TensorFlow for deep learning model training.
- Enhanced oral cancer detection accuracy through the integration of classification algorithms and transformation techniques in a sophisticated optimization model.
- Elevated prediction accuracy from 80% to 92% in preliminary testing by applying advanced transform and optimization methods.

4. Loan Amount Prediction Using Multivariate Linear Regression(Technologies used: Machine Learning, Python, Scikit-learn, Pandas, NumPy)

- Designed a predictive model for loan amounts using multivariate linear regression, leveraging borrower income, credit scores, and demographic data.
- Preprocessed a government-provided dataset with 50,000+ records, handling missing values, encoding categorical variables, and normalizing features.

- Achieved a Mean Absolute Error (MAE) of 5.2% and an R-squared score of 0.87, ensuring high prediction reliability.
 - Provided actionable insights into key factors influencing loan approval, assisting financial institutions in streamlining decision-making processes.
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Publications:

- Bharadwaj, K., "Analysis of Deep Learning based Optimization Techniques for Oral Cancer Detection," 2023 4th International Conference on Electronics and Sustainable Communication Systems (ICESC), Coimbatore, India, pp. 1550-1555, 2023
 - Bharadwaj, K., "Anomaly Detection Using Supervised Classifiers Combined with Feature Clustering Techniques." International Conference on Neural and Advanced Technologies, 2021.
 - Bharadwaj, K., et al. "Investigation on Enhancing the Binary Classification Accuracy of Supervised Classifiers Using Various Transform." Journal of Applied Science, vol. 1084, no. 1, pp. 012032, 2021.
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