Kiran Davuluri

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EDUCATION

Master of Science (Artificial Intelligence) **(Pursuing)** 08/2022 – present
University of Michigan, Dearborn
Concentration: Machine Learning

PROFESSIONAL EXPERIENCE

RESEARCH ASSISTANT, Percom Lab, University of Michigan 09/2023 – present
- Working on collaborative Drone-Car systems for Autonomous vehicles. Paper
  Github

RESEARCH INTERN, CV Lab, IIT Delhi 05/2023 – 08/2023
Domain: Scene Text Recognition, Generative Style Transfer Delhi
Advisor: Prof. Chetan Arora

- Worked on Scene Text Recognition task towards Mobility Assistance for Visually Impaired
- Implemented Diffusion and GAN based style transfer architecture for Indic Languages
- Emulated Denoising diffusion based deblending methods for efficient style transfer towards a goal of improved FID and recognition scores.

RESEARCH ASSISTANT, Percom Lab, University of Michigan 09/2022 – 04/2023
Domain: WiFi Sensing with AI Michigan, US
Advisor: Prof. Zheng Song

- Designed a walking direction estimation System that improves Smartphone based passive localization technique that achieves 8.89 error and reduces 75 percentile error by 64%

Resulted in a paper at MASS' 23. Paper

- Worked on BMI measurement using WiFi routers

Resulted in a paper at WFIoT' 23. Paper Github

PROJECT ASSOCIATE, Indian Institute of Information Technology 10/2020 – 08/2022
Domain: Computer Vision & Deep Learning based Image Forgery Detection Chennai, India
Advisor: Prof. V. Masilamani
- Ideated and developed Software Applications that detect and remove Forged Obscene Images/Videos from social media using ML algorithms

PROJECTS

BMI Measurement Using WiFi
- Developed for BMI prediction system using WiFi and ML algorithms
- Interpreted networking data packets collected from 30 people into image formats to fit into ML models
- Achieved 72% accuracy for classification of real-time data into BMI classes
- Enhanced team productivity by 70% by subdividing tasks, segregating team to enable pair programming

Speech To Text Convertor and Summarizer : A Marketing Strategy Tool
- Created a marketing strategy solution for sales executives that involved 70 real-time experiments
- Analyzed responses from 30+ business professionals and students in a survey
- Created a method that involves 3-Level Text Summarization and Speech Recognition
- Achieved 12% WER by deploying Watson Recognition in a smartphone application

UAV-Assisted Event Detection for Ground Vehicles
- Solved the limitations of autonomous vehicles that reduces time latency by 30% in detecting obstacles
- Implemented edge server-based video processing using drones, resulting in seamless car movement
- Improved user engagement and satisfaction metrics, leading to 23% increase in reaction time

- Analyzed solutions on abnormal event detection using UAVs from more than 100+ bird view videos of ground vehicles

PUBLICATIONS

1. BMEye: Public Health-Oriented Body Mass Index Monitoring using Commodity WiFi
WFIoT' 23

2. Business Intelligence based novel Marketing Strategy Approach using Automatic Speech Recognition and Text Summarization
CONF-CDS' 21

3. Security Analysis for Machine Learning and Image Processing Related Information Systems
ICIPCN '20

4. Design patterns for Machine Learning Applications
ICCMC' 19

CERTIFICATES

× **Python for Data Analysis and Visualization**
UDEMY

Neural Networks and Deep Learning
Coursera

× **Real-time OCR and Text Detection with Tensorflow, OpenCV and Tesseract**
Coursera

Introduction to Data Science in Python
Coursera