Sushanth Yelishetty

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EXPERIENCE

MAGNIFY BIOSCIENCES INC.
Robotics Software Support Engineer (Intern)
Dec 2024 - present | Pittsburgh, PA (Remote)
Programming, device support, deployment and debugging for the device specific to utilising IOT based programs and libraries on Raspberry Pi 4 and 5, and the completion of the device software and successful deployment of the device.

PROJECTS

RL-BASED SMART TRAFFIC MANAGEMENT SYSTEM

- Utilized Stable-Baselines3 and TensorFlow to design a reinforcement learning-based system for optimizing traffic light timing.
- Analyzed live traffic patterns to minimize congestion, reduce travel time and enhance traffic flow efficiency

DDPG MODEL USING SUMO (IN PROGRESS)

- Integrating SUMO (Simulation of Urban Mobility) with Stable-Baselines3 to simulate urban traffic scenarios and optimize public bus routes.
- Focused on generating paths that minimize travel time and avoid congested areas by identifying optimal routes using reinforcement learning techniques.

AI-POWERED MENTAL HEALTH SUPPORT PLATFORM

- Named PeaceOut AI; utilizes real-time sentiment analysis to provide personalized responses, enhancing user engagement and support.
- Built with Next.js 14 and TypeScript, styled using Tailwind CSS, and interactive 3D graphics made through Spline.

DEEP LEARNING-BASED AI ARTIFACT DETECTION (IN PROGRESS)

- Developing a PyTorch and OpenCV model to distinguish between real and AI-generated images, emphasizing artifact detection.
- Leveraging generative model analysis techniques to improve detection accuracy and transparency in AI detection systems; also designed a framework to enhance interpretability and reliability in AI-generated image detection.

GOEMOTIONS-BASED LINGUAL SENTIMENT MODEL

- Built a TensorFlow-based classification model using the GoEmotions dataset to identify 27 emotions across diverse text inputs.
- Implemented NLP pre-processing with NLTK and SpaCy to enhance sentiment analysis accuracy in user feedback.

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY, PATNA
Bachelor of Technology in Mechanical Engineering, with Master of Technology in Mechatronics (Dual Degree)
Expected May 2028 | Bihar, IN

SKILLS

LANGUAGES
Python • C/C++ • HTML and CSS

LIBRARIES AND FRAMEWORKS
C++ STL • TensorFlow • Keras • PyTorch • Scikit-learn • NumPy • Pandas • Matplotlib • Seaborn • Tkinter

SOFT SKILLS
Problem Solving • Presentation • Leadership • Management

COURSEWORK

Data Structures and Algorithms, Object-Oriented Programming, Web Development, Optimisation Techniques, Bayesian Statistics.

AREAS OF INTEREST

Machine Learning, Artificial Intelligence, Generative AI, Large Language Models, Software Engineering, Web Development. Optimisation Techniques, Bayesian Statistics.

LINKS

Github:// whysush
LinkedIn:// ysush