MONISH KUMAR DHANASEKAR

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science

Master of Science in Computer Science **Expected May 2025**

Relevant Coursework: Introduction to Machine Learning (ML), Design Patterns, Database Systems, Design and Analysis of Computer Algorithms, Operating Systems, Programming Languages, Programming for the Web.

TECHNICAL SKILLS

Languages: Python, C, Java, SQL, C++, JavaScript, TypeScript, HTML, CSS
Frameworks/Libraries: Django, React, Node.js, Express.js
Version Control Systems: Git
Database Tools: DBeaver, MongoDB, MySQL, S3
Tools: Robot Operating System (ROS2 foxy), Navigation System (NAV2), Spark.

PROFESSIONAL EXPERIENCE

Software Design Intern | Mistral Solutions Private Limited, Bangalore, India. **March 2022 – June 2022**

- Orchestrated pioneering robotics initiatives by integrating ROS 2 Foxy with Python, propelling machine learning advancements. Implemented innovative strategies to tackle intricate problems and achieve great outcomes, revolutionizing technological solutions.
- Applied advanced machine learning algorithms to enhance autonomous systems' intelligence, improving perception accuracy and system efficiency. Developed tailored solutions to meet specific project requirements and exceed performance expectations.
- Demonstrated mastery in front-end and back-end development, optimizing system architecture for superior user experiences. Utilized deep software engineering knowledge to ensure seamless integration and functionality.
- Led collaborative efforts, driving innovation through effective communication and exemplary leadership in a fast-paced environment. Fostered a culture of creativity and teamwork to inspire high levels of productivity and achieve ambitious goals.

Web Developer Intern | The Grafician. Chennai, India. **July 2022 – November 2022**

- Played a pivotal role in enhancing website functionality through collaborative brainstorming, demonstrating commitment to excellence and delivering exceptional results while staying ahead of industry standards with consistent pursuit of creativity.
- Mastered Python and JavaScript through immersive development tasks, enabling me to tackle complex challenges and deliver precise solutions. Explored new techniques to enhance development efficiency, demonstrating an insatiable curiosity.
- Fostered seamless collaboration between development and design teams, ensuring visually appealing and user-centric end products that exceed expectations.
- Carried out A/B testing methodologies to refine website features, resulting in a significant 10% improvement in conversion rates.

PROJECT EXPERIENCE

Self-Balancing Robot using Arduino, *Developer* | Team Project **June 2021 – August 2021**

- Spearheaded the design of an autonomous self-balancing robot using Arduino and C++, seamlessly integrating hardware and software to push the boundaries of robotics engineering.
- Implemented a PID control algorithm for precise motor speed adjustment and crafted robust code to extract IMU sensor data, enabling real-time orientation assessment and adaptive motor control to enhance the robot's responsiveness and adaptability.
- Demonstrated strong problem-solving skills and technical proficiency, contributing to the creation of an innovative and adaptable autonomous system that can excel in diverse scenarios.

Horror Movie Data Analysis, Software Engineer and Data Analyst | Team Project **December 2023**

- Engineered a groundbreaking analysis of horror film data, utilizing cutting-edge machine learning methods to uncover detailed audience preferences spanning decades, pivotal for informing strategic decisions in film production.
- Led the development and implementation of sophisticated software architecture, contributing expertise in both front-end and back-end technologies to integrate MongoDB Atlas and Python Flask framework for efficient data management and analysis.
- Collaborated on robust machine learning algorithms, resulting in a 25% improvement in predicting audience engagement.
- Utilized innovative approaches to visualize analysis findings, providing actionable insights into top-rated horror movies and audience engagement across diverse genre combinations, while ensuring seamless integration of front-end visualization tools.
- Showcased proficiency in NoSQL database administration and software architecture, developing robust analytical tools tailored for movie production, encompassing both front-end UI and back-end data processing for improved efficiency.