

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

August 2023 - May 2025

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

Anna University, Chennai, India

August, 2018 - May, 2022

Bachelors in Electrical and Electronics Engineering

Relevant Coursework: Problem Solving and Python Programming, Object Oriented Programming, Introduction to C Programming

TECHNICAL SKILLS

Languages: Python, Java, SQL, C, C++, JavaScript, TypeScript, HTML, CSS

Database Tools: MongoDB, MySQL, PostgreSQL, S3, DBeaver

Frameworks/Libraries: Django, React.js, Node.js, Express.js, Vue.js, TailwindCSS, TensorFlow, PyTorch, Keras, OpenCV, NumPy, Pandas

Tools: Docker, Hadoop, Vercel, ROS2 Foxy, Navigation System (NAV2), Spark, Git, GitHub, Tableau, Android Studio, Postman.

PROFESSIONAL EXPERIENCE

Software Design Intern | Mistral Solutions Private Limited. Bangalore, India.

March 2022 – June 2022

- Integrated ROS 2 Foxy with Python to enable real-time communication between sensors and a trained machine learning model for detecting biodegradable items, facilitating efficient data exchange and decision-making.
- Enhanced machine learning algorithms, boosting detection accuracy by 20% and perception accuracy by 15%.
- Optimized system architecture, cutting processing time by 25% and improving robot performance.

Web Developer Intern | The Grafician. Chennai, India.

July 2022 – November 2022

- Improved website functionality by implementing new features and optimizing existing ones through A/B testing, contributing to a 10% improvement in conversion rates and enhancing user engagement by refining user flows and interactions.
- Developed and optimized web applications using Python and JavaScript, enhancing development efficiency.
- Collaborated closely with design teams to ensure visually appealing and user-centric interfaces, resulting in high-quality end products that met and exceeded client expectations.

Software Development Intern | Entertainment Technologists Development Corp. California, USA.

Sept 2024 - Present

- Engineered AI/ML models with various libraries, including TensorFlow, Keras, Pandas, and OpenCV, to enhance media processes such as image processing, video rendering and content analysis.
- Increased model efficiency by 15% through fine-tuning and advanced algorithms for processing various media inputs.
- Implemented seamless integration between front-end interfaces and AI/ML models, streamlining input data collection workflows and reducing processing time by 20%.

PROJECT EXPERIENCE

Horror Movie Data Analysis, Software Engineer and Data Analyst

December 2023

- Conducted comprehensive analysis of horror film data using machine learning to uncover audience preferences across decades.
- Designed and deployed a scalable software architecture utilizing MongoDB Atlas and Python Flask for efficient data management.
- Enhanced audience engagement predictions by 25% through advanced algorithms and data visualizations.

Air Mouse, Developer

July 2024

- Created an Air Mouse application using Python, harnessing OpenCV for video capture and image analysis, combined with Mediapipe for accurate hand tracking.
- Applied “pynput” to map hand gestures into mouse actions, achieving real-time cursor control and click detection.
- Showcased adeptness in computer vision and gesture tracking through seamless technology integration.

ATS Resume Checker, Developer

August 2024 - September 2024

- Built an ATS Resume Checker with Python and Flask, designed to analyze resumes and match them to job descriptions.
- Utilized Natural Language Processing (NLP) libraries to extract and interpret critical details from resumes and job postings.
- Constructed an intuitive web interface for easy resume uploads and detailed feedback, highlighting expertise in backend development, NLP, API's and AI integration.