

TANUSHREE CHOWDHURY

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Work Experience

Outlier

Jun 24 - Present

Software - AI Training (Remote)

San Francisco, California, United States

- Objective: Develop and refine AI models to achieve higher accuracy and performance in specific tasks.
- Approach and Result: Leveraged extensive datasets and implemented deep learning and reinforcement learning. Enhanced model accuracy by this optimization process, ensuring reliable AI applications.

Dreadnought Robotics

Apr 23 - Present

Programming and Analysis

Chennai, India

- Objective: TAC Challenge 2024.
- Approach and Result: Used camera calibration for arUco markers using openCV libraries and used MediaPipe in python to implement pose estimation for multiple markers.

Education

Vellore Institute Of Technology **B.Tech in Electronics and Computer Engineering** (CGPA) **Grade: 8.24**

Atomic Energy Central School **PCMB; Class 12 CBSE Boards** **Grade: 95.8%**

Atomic Energy Central School **Class 10 CBSE Boards** **Grade: 93.4%**

Projects

• Autonomous Underwater Vehicle, Dreadnought Robotics, VIT Chennai |

Project description: Developed a Level 3 autonomous system for pipeline inspection and object detection.

Engineered a stereo camera system with depth estimation algorithms using ROS, OpenCV, and Python, reducing error margins.

Implemented A* motion planning algorithm for optimized pathfinding, improving movement efficiency.

Designed a protective platform for housing electronics, ensuring operational functionality in underwater environments.

• Disaster Information Aggregation Software, Smart India Hackathon 2024 |

Project description: Developed a disaster aggregation system by gathering and analyzing data from news sources and social media, enabling better disaster response.

Designed an interactive disaster map with sentiment analysis and location detection, improving response time.

Integrated A* search algorithm for optimized evacuation paths, reducing evacuation time.

Developed a resource distribution model based on severity, ensuring more efficient resource allocation.

• Inventory Management Forecasting, Woodpecker Hackathon |

Project description: Built time series models (SARIMA, Prophet, LSTM) for energy demand and retail sales forecasting, resulting in a forecasting accuracy of 92%.

Developed and deployed a cloud-based solution using data engineering tools, improving operational efficiency.

Automated model deployment pipeline, reducing time spent on data processing and model updates.

Technical Skills

Programming Languages: Python, R, C, C++, SQL, JavaScript, HTML/CSS

Developer Tools: Git, GitHub, VS Code, RStudio, Tableau, Cloud (GCP), Excel

Technologies & Frameworks: OpenCV, ROS, TensorFlow, PyTorch, MediaPipe, MongoDB, React, Node.js, Arduino

Data Science/AI Tools: scikit-learn, Pandas, Numpy, Matplotlib, Seaborn, Keras

Other: Ubuntu, Agile, REST APIs, Cloud Computing

Leadership / Achievements

- **2nd Place**, TAC Norway 2024 competition
- **Top 30 Teams**, Smart India Hackathon 2024
- **Content Lead**, Tech Researchers Club
- **1st Position**, 12th Grade CBSE Board Examinations

Certifications

- Microsoft Certified: Azure AI Fundamentals (AI 900)