

# Tejaswee Kumar Singh

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## EDUCATION

### IIIT Bhubaneswar

Bachelor of Technology in Computer Science and Engineering Post 4th Semester (CGPA: 8.62/10)

Odisha, India

2022 - 2026

### ODM Public School

12th Board 96 %

Bhubaneswar, Odisha, India

2020 - 2022

## EXPERIENCE

### Intel Unnati Industrial Training Program

May 2024 - June 2024

- Developed a project that solved real world problems like automatic EDA, pattern and Insights generation from structured data fastening process of data analysis, under the guidance of industry experts from intel.
- Gained hands on experience in **AI, LLM, AWS and Machine Learning** from industry experts.

## PROJECTS

### Insights Masters

*A web app to help in the task of data analysis*

- **Developed a web app** that incorporated automatic exploratory data analysis and preprocessing, delivering visual charts and generating actionable insights from datasets exceeding **6 million** records while collaborating with Intel industry experts..
- **Engineered a robust QA bot** capable of interpreting complex inquiries from large datasets while producing insightful visual representations, powered by **Gemini LLM and Langchain library**.
- **Deployed backend functionality using AWS services** that reduced insights generation time by **50%** making it secure and reliable for large datasets.

### Under - Water Image Enhancement

*A modified version of famous U-net architecture with DepthWise Convolutional layer and CBAM layers.*

- **Pre-processed** distorted underwater images to improve visibility and clarity by **39.57 %** using WB balancing, unsharp masking and CLAHE .
- **Modified U-Net Architecture** by using DepthWise Convolutional Layers and CBAM layers. These modification reduced the primary model size by **70%** and trained with **10,000** images dataset.

### Football player performance analysis

*A fine tuned YOLO model for real time football player performance analysis*

- **Implemented transfer learning from a state of art YOLO object detection model** and fine-tuned it on custom dataset of **600** images.
- **Extracted key metrics** like player's speed, total distance and successful passes with real time tracking of players and football.

## TECHNICAL - SKILL

- **Programming Languages:** C, C++, Go Lang, Python, JavaScript, Typescript, HTML5
- **Libraries & Frameworks:** TensorFlow, Nodejs, Reactjs, Langchain
- **Tools & Technologies:** Git, MLFlow, Docker, AWS, Apache, Kafka
- **Databases:** MongoDB, PostgreSQL

## HONORS

### Finalist in International Bit N Build Hackathon

2024

*Fr. Conceicao Rodrigues College of Engineering*

## Volunteering

### AI - ML Associate

2023 - 2024

*GDSC, IIIT Bhubaneswar*