

## NANDITHA L

Student | Aspiring AI & Data Science Professional

## CONTACT

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## PROFILE

Second-year B.Tech student passionate about **technology, innovation, and community service**. Skilled in programming languages like **Python and C++** with a strong interest in **UI/UX design, game development, and data analytics**. Effective **team player** with a commitment to continuous learning and professional growth.

## EDUCATION

**Jerusalem College of Engineering**

**Bachelor of Technology in Artificial Intelligence and Data Science** (Class of 2023-2027)

**Relevant Coursework:** Data Structures, Machine Learning, Power BI, MySQL, Python, Data Science

## CERTIFICATIONS

- ◆ **Power BI:** Mastered data visualization, business intelligence, and dashboard creation.
- ◆ **MySQL:** Proficient in advanced database management and querying techniques.
- ◆ **Python for Data Science:** Acquired skills in Python programming for data analysis and machine learning.
- ◆ **360DigiTMG Certification in Data Science:** Comprehensive training in data preprocessing, exploratory data analysis (EDA), and model building.

## SKILLS

- ◆ **Programming Languages:** Python, C++, SQL
- ◆ **Data Visualization:** Power BI, Matplotlib, Seaborn
- ◆ **Tools & Platforms:** MySQL, spyder IDE, Jupyter Notebook
- ◆ **Technical Expertise:** Machine Learning, Data Analysis, Dashboard Design

## PROJECTS WORKED ON

**Workplace Safety and Compliance Monitoring System:** Developed a system to enhance workplace safety by **automating compliance checks, monitoring environmental conditions, and ensuring regulatory adherence using AI and IoT**.

## LANGUAGES

- ◆ **English:** Fluent
- ◆ **Tamil:** Fluent
- ◆ **Hindi:** Proficient in reading and writing

# **PROJECT 1: WORKPLACE SAFETY AND COMPLIANCE MONITORING**

## **BUISNESS PROBLEM:**

To minimize safety hazards and regulatory fines, automated monitoring is needed. To maximize efficiency, it replaces manual reporting prone to delays and errors.

## **BUISNESS SOLUTION:**

- Uses computer vision and deep learning to detect **PPE violations**.
- Monitors worker posture to prevent ergonomic hazards.
- Provides real-time alerts and compliance reports.
- Ensures regulatory adherence and enhances workplace safety.

**Feature Engineering:** PPE classification, pose estimation, and risk assessment.

**Model 1 – PPE Detection :** YOLO (v8)

**Model 2 – Pose Estimation :** MediaPipe

## **TECHNOLOGY STACK:**

- Programming Languages: Python
- Libraries: Ultralytics,opencv, mediapipe,PyQt5,TensorFlow,streamlit
- Software/IDE: Spyder,Google Colab
- Database: PostgreSQL
- Version Control: GitHub
- Other Tools: roboflow

## **BUISNESS BENEFITS:**

- Improved Workplace Safety
- Regulatory Compliance
- Operational Efficiency
- Cost Reduction
- Real-time Monitoring
- Scalability