TUSHAR KOLEY

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SKILLS

- **Programming Language:** Python (NumPy, Pandas), SQL
- **Core Skills:** Machine Learning, Deep Learning (CNN), Data Cleaning, Data Analysis
- **Gen-AI Specific Skills:** Large Language Models (LLMs), LLM Concepts, Prompt Engineering, Experience with OpenAI & Gemini APIs
- **Tools & Frameworks:** MS Excel, Spreadsheets, MS Office Suite, Power BI

PROJECTS

Major – Project: -

Smart and Early Health Abnormality Diagnosis System   **August, 2024 – May, 2025**

- **Key Features & Functionalities**

  - Engineered a complete IoT data acquisition system using Raspberry Pi and Arduino to capture real-time patient vitals from ECG and pulse oximeter sensors, processing over **1,000 data points per minute**.

  - Led the end-to-end data pipeline for the detection model, processing and labelling a dataset of over **2350 ECG graph images** to ensure high-quality training data.

  - Trained a custom YOLOv9 object detection model that achieved **94% accuracy** in identifying over **+5 distinct arrhythmia diseases** from ECG graph images.

  - Integrated the trained model via API into a full-stack web application, reducing analysis time for patients from **hours to under 30 seconds**

- **Technical Stack**

  - **AI/ML:** Roboflow Platform, YOLOv9, Object Detection, Data Labelling, Data Collection and Cleaning
  - **Hardware:** Raspberry Pi, Arduino, ECG & Pulse Oximeter Sensors
  - **Core Software:** Python, Arduino Libraries, C ++
  - **Project Web Stack**: React, TypeScript, Tailwind CSS, Spring Boot and Netlify

Mini – Projects: -

- Building AI applications for Q&A chat-bot based on uploaded images.

EDUCATION

B. tech | Electronics and Communications Engineering   **August, 2021 – June, 2025**

St. Thomas' College of Engineering and Technology, Kolkata   **Percentage:** 79.77

TRAINING & CERTIFICATIONS

- Completed the **Deloitte Australia Data Analytics Job Simulation** on Forage (April 2025), involving data classification in Excel, dashboard creation in Tableau, and forensic technology analysis.

- Completed skill development vocational training on **Signal transmission and Radio Broadcasting** for One Month in the year 2024 at **All India Radio (Prasar Bharati)**.

- Completed **Python Internship Training** at **Extern's Club** (Jan 2023 - Feb 2023), focusing on collaborative problem-solving and project development.

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