Dipanjan Sheth

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Education

Institute of Engineering and Management (School of UEM Kolkata),   Jul 2023 – Jan 2027
B.Tech - CSE(AIML)

- CGPA-8.90

Basirhat Town High School (H.S.)l   *Apr 2022 – May 2023*

- **WBCHSE- 12th – PCM: 83%**

- *Location: Basirhat, WestBengal,India*

Projects

Online Competitive Exam and Classes

- project offers a platform for students to prepare for competitive exams. It provides live classes, mock tests, practice questions, and performance analytics. The platform ensures user-friendly navigation, real-time progress tracking, and personalized recommendations to enhance learning outcomes and exam readiness.
- Tools Used: HTML, CSS, JavaScript, React.js , MySQL

INTRUSION DETECTION using YOLO v5

- The Intrusion Detection project using YOLOv5 leverages computer vision and deep learning to identify unauthorized access or suspicious activities in surveillance footage. YOLOv5, a real-time object detection model, is trained to recognize intruders or unusual behavior. The system offers high accuracy and fast detection, enhancing security through automated monitoring and alerting, reducing the need for manual oversight.
- Tools used: YoLOv5: Object detection. Python PyTorch: For model training. OpenCV: Video/image processing.

Household Energy Consumption Optimization

- project aims to reduce energy usage through smart monitoring and management of household devices. Using data analytics and machine learning, it analyzes consumption patterns, predicts energy needs, and provides recommendations for efficient usage. The system can automate device control, optimizing energy savings while maintaining comfort and functionality.
- Tools used:

Python, Scikit-learn, TensorFlow/Keras, IoT devices .

Certifications

- **LinkedIn Learning**   *May 2024*
  Career Essentials in Software Development, Kolkata, West Bengal

  – It is an immersive course designed to provide foundational skills in software development. The course covered programming fundamentals, web development, and software development tools.

  – I learned essential professional skills for effective communication and teamwork. The program also offered career development strategies, which helped me build a professional portfolio and prepare for job opportunities in the tech industry.

- **NPTEL**   *Jan 2024*
  Python for Data Science, Kolkata, West Bengal

  – This course provides an introduction to the use of Python programming for data science. It covers basic to advanced concepts in Python and its application to data analysis and visualization.

  – I have gained knowledge of some key libraries and tools in Python used in data science, such as NumPy, pandas, Matplotlib, and scikit-learn.

- **Matlab** *Oct 2024*

- *Machine Learning Onramp*
  Matlab Academy

    – This course provides an introduction to the use of Python programming for data science. It covers basic to advanced concepts in Python and its application to data analysis and visualization.

- *Object-Oriented Programming Onramp*
  Matlab Academy

    – The course develops skills in designing modular, reusable, and maintainable code using object-oriented programming principles in MATLAB. It helps structure complex applications, improving code organization and scalability for advanced projects.

- *App Building Onramp*
  Matlab Academy

    – This course enables learners to create interactive applications using MATLAB's App Designer. It aids in building custom tools for data analysis and visualization, streamlining workflows and enhancing user interaction for practical problem-solving.

- *MATLAB Onramp: Getting Started with MATLAB*
  Matlab Academy

    course provides foundational knowledge of MATLAB, teaching basic programming, data analysis, and visualization. It helps learners efficiently solve mathematical problems and automate tasks, making it essential for engineering and data-focused projects.

- **Coursera** *Sep 2024*
  Advanced System Security Topics, Kolkata, West Bengal

    – I have gained in-depth knowledge of system vulnerabilities, penetration testing, and advanced cryptography techniques. I learned to analyze and mitigate security threats, understand secure system design, and apply practical security measures to protect networks, applications, and data from advanced cyber-attacks.

  Introduction to the Internet of Things and Embedded Systems, Kolkata, West Bengal

    – "Introduction to the Internet of Things (IoT) and Embedded Systems" explores the integration of physical devices with the internet for data exchange and automation. It covers the basics of embedded systems, microcontrollers, sensors, and actuators, demonstrating how these technologies enable smart environments. The course emphasizes IoT applications in various fields, including home automation, healthcare, and industrial monitoring.

  Google Data Analytics Professional Certificate

    – "The Google Data Analytics Professional Certificate provides comprehensive training in data analysis, covering key topics like data cleaning, visualization, statistical analysis, and using tools like Excel, SQL, and R. The program teaches how to interpret data, create actionable insights, and communicate findings effectively, preparing individuals for entry-level roles in data analysis and related fields.

- **UEM KOLKATA, HACKIVE HOOPLA 2.0** *oct 2024*
  Participant, kolkata, West Bengal

    – We designed a Online Coaching and Competitive Exam Project focuses on creating a digital platform to enhance exam preparation. It offers features like interactive quizzes, practice tests, performance analytics, and video tutorials. Using AI and data analytics, the system personalizes learning, identifies weak areas, and provides targeted recommendations. This project aims to make competitive exam preparation efficient, accessible, and user-centric, catering to students' individual needs through innovative and interactive solutions.

- **UEM KOLKATA, Bio-Spectrum** *oct 2023*
  2nd position, kolkata, West Bengal

  - We designed a poster on Nanotechnology in gene transfer leverages nanoscale materials and systems to enhance the delivery of genetic material into cells. Nanocarriers like liposomes, nanoparticles, and nanofibers protect DNA or RNA from degradation, ensuring efficient cellular uptake. This approach improves precision, reduces side effects, and enables targeted gene therapy for treating genetic disorders, cancer, and infectious diseases. Nanotech-based gene transfer holds immense potential in advancing personalized medicine and innovative treatments for complex diseases.

- **UEM KOLKATA, Hands-on-IoT Workshop** *Aug 2024*
  Participant, kolkata, West Bengal

  - The **Hands-on IoT Workshop** was highly beneficial for me as it provided practical experience in working with sensors, microcontrollers, and real-time data communication. It enhanced my understanding of IoT applications in automation and smart devices. I gained valuable skills in programming, hardware integration, and problem-solving, which have prepared me for real-world IoT projects and future opportunities in the field of embedded systems and smart technologies.

TECHNICAL SKILLS

  - **Languages:** Python, Java, C, HTML, CSS, JavaScript

  - **Deployment:** Replit, Gitpages, Netlify

  - **Hardware:** Arduino, Raspberry Pi

  - **Miscellaneous:** VS Code, IDLE, SQL, Figma, Excel, PowerPoint, Postman