Amartya Roy | Fresher

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Kolkata, INDIA

LinkedIn Portfolio GitHub

B.Tech student in Information Technology with a solid foundation in computer science. Passionate about building web applications and machine learning models. Skilled in Python, Java, and web development, with strong teamwork, problem-solving, and communication abilities. Looking to apply my skills in a challenging tech role.

Education:

- B. P. Poddar Institute of Management and Technology, B.Tech. in Information Technology [August 2022 to Expected June 2025]
  [CGPA: 7.45]
- Behala Govt. Polytechnic, Diploma in Computer Science and Technology
  [August 2019 to July 2022] [CGPA: 8.0]
- XII Board Examination (WBCHSE), Science Stream
  [March 2018 to March 2019] [Percentage: 65.8%]
- X Board Examination (WBBSE) [Jan 2016 to March 2017]
  [Percentage: 79.81%]

Projects:

A Secure Realtime System Using Machine Learning, IoT & Blockchain (August 2024 - Present)

- **Project Scope:** Building a real-time face emotion recognition and Sign Language Detection system combining machine learning, IoT devices, and blockchain technology.
- **Machine Learning Component:** Developing an ML model to detect and classify facial emotions accurately based on video input as well as Sign Language for non-verbal communication.
- **IoT Integration:** Using IoT devices to capture high-resolution video streams, enhancing the quality of emotion recognition, Hand gestures for sign language and overall system performance.
- **Blockchain Security:** Implementing Hyperledger Fabric technology in a production level with the help of RAFT consensus algorithm with dynamic timing to secure the transmitted video data, ensuring data privacy, integrity, and tamper-proof storage from stored to processed.
- **Project Status:** The project is currently in progress, with ongoing development and integration of the ML model, IoT devices, and blockchain components.

Sign Language to Text Translator (July 2024 – August 2024)

- Developed a real-time sign language recognition model with precise accuracy using Python, TensorFlow, and MediaPipe Holistic.
- Captured and processed gesture data with 1662 key points across 30 sequences for each gesture.
- Built an LSTM-based neural network for classifying basic gestures i.e. "Hello," "Thanks," and "ILove U."
- Trained the model over 2000 epochs, utilizing early stopping for optimal performance.
- Future plans include expanding the dataset and deploying the model in web/mobile application

Steganography using LSB method (June 2022 – July 2022)

- Developed a steganography application in Python that enables covert communication by embedding secret messages within image pixels using the Least Significant Bit (LSB) technique.
- Explored various secure communication methodologies, highlighting the potential applications and benefits of steganography in data security.

Technical Skills

- Programming Languages: Python, Java, SQL
- Tools and Technologies: Git
- In progress: Machine Learning

Soft Skills

- Teamwork & Collaboration: Working effectively within diverse teams to achieve shared objectives.
- Discipline: Consistently meet deadlines and maintain standards of quality in all deliverables.
- Communication: Descent verbal and written communication skills, clear and effective interactions with team members. Strong attention to detail, ensuring accuracy and thoroughness in all tasks.

Language:

- English: C1 level
- Hindi: C1 level
- Bengali: Native

Extra Curriculum Activity:

- Achieved 2nd runner-up position in creative writing at College Cultural Fest, ELIXIR 2023.
- Actively participated in the Intracollege Football Tournament, demonstrating teamwork and sportsmanship.

Interests:

Passionate about sports, traveling, reading, and art, which contribute to a well-rounded perspective and creative approach to problem-solving.

Declaration:

I, Amartya Roy, hereby declare that the information provided in this resume is accurate and true to the best of my knowledge. I accept responsibility for any errors that may arise in this.