

# Jay Pathak

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## SKILLS

- **Languages:** C++, Java, C, Python, HTML, CSS
- **Core Concepts:** Data Structures & Algorithms, Object Oriented Programming, Problem Solving
- **Frameworks:** Streamlit
- **Machine Learning:** TensorFlow, XGBoost, NLP, Model Training, Feature Engineering
- **Tools/Platforms:** Git, GitHub, Postman, MySQL, Google Colab, Jupyter Notebook, VS Code, Unity
- **Soft Skills:** Problem-Solving, Analytical Thinking, Adaptability, Leadership, Effective Communication

## PROJECTS

- **Hospital Sentiment Intelligence Dashboard** | [GitHub](#) | [Live](#) December 2025
  - Engineered a BiLSTM sentiment classifier achieving ~85% validation accuracy on 22K+ samples.
  - Leveraged advanced NLP preprocessing including lemmatization, negation preservation, noise reduction, and dataset balancing.
  - Enhanced model reliability through structured data cleaning and validation strategy.
  - Created an interactive Streamlit dashboard for real-time single and bulk sentiment analysis with visual analytics.
  - Tech: Python, TensorFlow(BiLSTM), NLP, NLTK, Streamlit, Scikit-learn.
- **SolarECO – Solar Panel Efficiency Prediction & Recommendation** | [GitHub](#) | [Live](#) April 2025
  - Formulated an XGBoost regression model for solar efficiency prediction based on environmental datasets.
  - Deployed a recommendation pipeline and AI chatbot to enhance user interaction and decision support.
  - Structured a web interface enabling dynamic efficiency analysis and visualization.
  - Delivered performance-oriented insights to support optimized solar adoption strategies.
  - Tech: Python, XGBoost, ML, Streamlit, Flask

## TRAINING

- Summer Training – Mastery in Game Development (Cipher Schools) | [Live link](#) June 2025 - July 2025
    - Built an interactive puzzle game using Unity and C#.
    - Learned core game mechanics, scripting, and debugging in Unity.
- Tech stacks used: Unity, C#

## CERTIFICATES

- Privacy and Security in Online Social Media by NPTEL | [Certificate](#) October 2025
- IBM Machine Learning with Python by Coursera | [Certificate](#) September 2025
- Game Development using Unity & C# by Cipher School | [Certificate](#) July 2025
- Introduction to Generative AI by Coursera | [Certificate](#) June 2024

## ACHIEVEMENTS

- Secured a position among the top innovators at LPU's Innotech Project Expo (2025). April 2025
- Ranked in the top 10 participants in Capture The Flag – Republic of Cyber Central (2024) January 2024

## EXTRA-CURRICULAR

- **Event Manager - Club Pentaomnia:** August 2024 - Present  
Organised and managed national-level college events including National Powerlifting Championship and cultural programs.
- **Paridhee Sewa Sansthan (NGO):** June 2024 - July 2024  
Organized and delivered HIV/AIDS awareness sessions in rural communities while coordinating health check-up initiatives in collaboration with local volunteers.

## EDUCATION

- **Lovely Professional University** Punjab, India  
Bachelor of Technology - Computer Science and Engineering; **CGPA: 8.52** August 2023 – Present
- **Mariya Assumpta Senior Secondary School** Kashipur, Uttarakhand  
Intermediate; **Percentage: 93%** April 2021 - March 2023
- **Mariya Assumpta Senior Secondary School** Kashipur, Uttarakhand  
Matriculation; **Percentage: 93%** April 2019 - March 2021