



SUMIT MUKHERJEE | 23EC10093

Indian Institute of Technology Kharagpur

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EDUCATION

Year	Degree/Exam	Institute	CGPA/Percentage
2027	B.Tech, Electronics & Electrical Communication Engineering	Indian Institute of Technology Kharagpur	9.71
2023	Class XII, WBCHSE	Rampurhat JL Vidyabhaban	98%
2021	Class X, WBBSE	Rampurhat JL Vidyabhaban	99.57%

AWARDS AND ACHIEVEMENTS

- Distinguished as a **Senior Scholar** (2023) and **Junior Scholar** (2021) by **Jagadish Bose National Science Talent Search** (JBNSTS)
- Secured All India Rank **4329** (CRL) out of 2.5 lakh shortlisted candidates in **Joint Entrance Examination Advanced 2023**
- Among the **top 2%** of students in the first year securing a **Department Change** in a batch of more than 1800 students with 9.74 GPA
- Bagged General Merit Rank of **126** in **West Bengal Joint Entrance Examination 2023** among 1.2 lakhs appeared candidates
- Received recognition from the **Chief Minister of West Bengal** for achieving 7th State Rank in the WBCHSE 2023 (Class 12th Board Exam)
- Selected as a **Reliance Foundation Undergraduate Scholar** from over 5,000 students across India after a rigorous screening test
- Among the top 100 candidates from over 65,752 applicants for the **IET Scholarship** for innovative engineering solutions to societal challenges

PROJECTS

- Clustering Algorithm Implementation | Python, Machine Learning***May'24 - Jun'24*
- Developed and applied clustering algorithms (K-means, DBSCAN) for data segmentation, improving pattern recognition
 - Evaluated model performance using the elbow method and silhouette score to optimize clustering results
 - Visualized clusters using Matplotlib and Seaborn, showcasing distinct data groupings for real-world datasets
- Personal Portfolio Website | HTML, CSS, JavaScript***Sep'24-Present*
- Designed and developed a fully functional personal portfolio website to showcase projects, skills, and achievements
 - Integrated interactive UI/UX elements using JavaScript, ensuring smooth navigation and dynamic content rendering
 - Currently learning the MERN stack to enhance responsiveness and scalability for improved user experience across devices

PREVIOUS EXPERIENCE

- Prompt Engineer | Outlier***Aug'24 - Present*
- Utilized pre-training and fine-tuning techniques to train LLMs on vast amounts of unsupervised text data and specific task-oriented datasets
 - Evaluated model responses based on criteria such as instruction adherence, factual accuracy, brevity, formatting and writing style
 - Improved LLM performance by filtering outlier data, cleaning multilingual datasets and refining prompts to enhance NLP capabilities
- JEE Mentor | PhysicsWallah***Jun'24 - Present*
- Delivered weekly mentoring sessions, guiding over 750 Class 11th JEE aspirants in their academic journey
 - Conducted evaluative quizzes and maintained consistent engagement, ensuring timely and effective student support
 - Addressed students' academic and non-academic queries, providing guidance on time management and exam preparation

COURSEWORK INFORMATION

- **Computer Science:** Programming & Data Structures*
 - **Mathematics:** Advanced Calculus | Linear Algebra, Numerical & Complex Analysis | Probability & Statistics
 - **Core:** Network Theory* | Semiconductor Devices* | Analog Electronic Circuits*
 - **MOOCs:** Machine Learning Specialization by DeepLearning.AI & Stanford University (Instructor: Prof. Andrew Ng)
 - **Miscellaneous:** Basic Engineering Mechanics* | Electrical Technology* | Physics of Waves* | Science of Living Systems | Engineering Drawing & Computer Graphics* | Chemistry* | English for Communication | Environmental Science | DIY Project
- (* marked courses have a laboratory component as well)

SKILLS AND EXPERTISE

- **Programming Languages:** C | C++ | Python | HTML | CSS | Javascript
- **Libraries and Frameworks:** Numpy | Pandas | Matplotlib | Seaborn | Scikit-learn | TensorFlow | Keras
- **Software and Tools:** Git | GitHub | Jupyter Notebook | Visual Studio Code | Google Colab | Canva | MS Office | LTSpice | MATLAB

POSITIONS OF RESPONSIBILITY

- Senior Executive Member** | Gopali Youth Welfare Society*Jul'24 - Present*
- Hosted an introductory seminar and conducted group discussions and personal interviews to successfully select and onboard freshers
 - Managed and oversaw the Independence Day celebrations at Jagriti Vidyamandir, ensuring a well-coordinated and impactful event
- Secretary** | Meghnad Saha Hall of Residence*Sep'24 - Present*
- Contributed to the planning and execution of a Grand Dinner, enhancing community engagement and participation
 - Assisted in organizing and facilitating a General Body Meeting for efficient budget allocation, ensuring transparent decision-making

EXTRA CURRICULAR ACTIVITIES

- Volunteered with various NGOs, including serving as a Crowdfunding Intern at Muskurahat Foundation
- Regularly engaged in NSO (National Sports Organization) Yoga, with a focus on holistic wellness
- Gathered and analyzed critical college data to support event planning and seamless execution at Shaurya (Annual Sports Fest of IIT Kharagpur)