



**Sparsh Gautam**  
UG (III Year I Semester)  
B.Tech. (Electronics & Communication Engineering)  
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Registration No: 23116094/2026

Indian Institute of  
Technology  
Roorkee

  
**VERIFIED**

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2024	B.Tech. 2nd Year	Indian Institute of Technology, Roorkee	8.000
2023	Intermediate (Class XII)	Kenbridge School, Kota	91.60 %
2021	Matriculate (Class X)	Little World School, Jabalpur (CBSE)	92.40 %

Projects

- Compression and decompression Portal** | IIT Roorkee June 2025
  - Developed a full-stack web application for file compression/decompression using **Huffman, RLE, and LZ77 algorithms**.
  - Designed a responsive UI with React.js and CSS supporting file uploads, algorithm selection, and downloads.
  - Built RESTful APIs using Node.js and Express to manage file handling, compression logic, and robust error handling.
- Automated Meta Data Generation** | IIT Roorkee June 2025
  - Developed a modular Streamlit web application to process and extract metadata from **PDF, DOCX, and TXT** files.
  - Integrated advanced NLP models (knkarthick/MEETING\_SUMMARY, KeyBERT) for summarization and keyword extraction.
  - Engineered a scalable backend pipeline leveraging **pdfplumber, EasyOCR, and HuggingFace Transformers**.
- Credit Card Score Modeling via Classification & Risk Techniques** | IIT Roorkee May 2025 - June 2025
  - Preprocessed data (**30K+ records**) by handling missing values, fixing category errors, and handling class imbalance.
  - Trained **6 models** different models selected **LightGBM** based on best **F2-score (0.6094)** for high-risk detection.
  - Fine-tuned hyperparameters of classification model then identified an optimal decision threshold based on F2-Score.
- Design a modulator and demodulator for an SSB-SC** | ECE dept. IIT Roorkee August 2024 - November 2024
  - Designed and implemented analog SSB-SC system using discrete hardware with a **400Hz message and 4kHz carrier**
  - Built and tested a phase-shift modulator and balanced mixer to achieve carrier suppression and sideband transmission
  - Recovered the transmitted signal using **synchronous demodulation** and low-pass filtering for noise reduction

Awards / Scholarships / Academic Achievements

- Secured All India Rank of **3161** in Joint Entrance Exam (Advance) 2023 among **1.8 Lakh candidates**
- Secured All India Rank of **4984** in Joint Entrance Exam (Main) 2023 among **11.13 Lakh candidates**
- Winner, DRONE4S Drone for Sustainability, held by IIT Roorkee Secured **1st place in drone innovation competition**.
- Achieved Global Rank of **29** in Codechef Starters174C
- Achieved Global Rank of **78** in Codechef Starters172C
- Achieved Global Rank of **305** in Codechef Starters188B
- Achieved Global Rank of **477** in Codechef Starters191B
- Achieved Global Rank of **487** in Codechef Starters175B
- Achieved Global Rank of **837** in Educational Codeforces Round 179 (Rated for Div. 2)

Skills

- Computer languages
- C++, Python
- Languages Known
- English (SRW), Hindi (SRW)

Positions of Responsibility & Extra Curriculars

- Competitive Programming** | Online Judge October 2023 - Present
  - Codeforces Expert **Max Rating: 1692** | Handle: sparsh\_03
  - CodeChef 4 star Coder **Max Rating: 1802** | Handle: sparsh\_0303
  - Participated in **100+** rated contests across platforms, honing skills in algorithms, data structures and problem-solving.
  - Continuously improved through post-contest upsolving and analysis, with a focus on time-efficient and optimized solutions.
- Member** | NSO Athletics July 2023 - June 2024
  - Was a part of IIT Roorkees High Jump team, demonstrating dedication, perseverance, and a strong competitive mindset.
  - Managed intensive training sessions alongside academic commitments, reflecting strong discipline and focus
  - Collaborated with peers and coaches to execute structured training sessions, enhancing team performance.

References

- Dr. Vinod pankajakshan**  
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