

Harsh Singh

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EDUCATION

- **Indian Institute of Technology(IIT) Patna** Patna, India
(BTech in Chemical and Biochemical Engineering. **CPI: 7.82**) May 2025 (Expected)
- **SBVM Inter College** Lucknow, India
(UP Board Intermediate Examination (UPBIE) conducted by UPMSP. **Percentage: 76.6%**) March 2020

PROJECTS

- **Driver Drowsiness Detector(Classifier Algorithms, ML)** Source Code
Hacktober '22 October 2022
 - Spearheaded real-time drowsiness detection through cutting-edge Eye-Tracking employing Haar Cascades and the CamShift algorithm.
 - Engineered a robust CNN-based feature extraction pipeline, leveraging the power of the final pooling layer.
 - Achieved a remarkable 20% boost in video analysis accuracy while concurrently slashing processing time by an impressive 30%.
 - Elevated system performance by fine-tuning neural network weights with precision, employing the highly effective Adam Optimization algorithm.
- **EtherEyes (ML, SARIMA, DLM)** Source Code
INTER IIT TECH MEET 11.0, IIT Kanpur February 2023
 - Development of a gas price prediction system, empowering users with cost-efficient transaction decisions and timely notifications.
 - Applied SARIMA analysis to model and scrutinize 100 hours of historical gas price data.
 - Led a dynamic, six-member team in designing layouts and themes, collecting and analyzing data through Owlracle API for accurate gas price predictions.
 - Introduced strategic transaction recommendations, advising users to buy at the lowest gas prices, coupled with an urgency feature.

ACCOMPLISHMENTS

- **750+** Questions solved on various programming platforms.
- Bagged **Bronze Medal** in INTER IIT TECH MEET 11.0 for developing snaps for Metamask.
- Secured an All India Rank of **10712** out of more than **0.17** million candidates in JEE Advanced 2021.
- **Qualified NTSE'20 - Stages 1 and 2**, ranked among top 1000 out of more than 1 million candidates.

SKILLS/RELEVANT COURSEWORK

- **Languages:** C, C++, Java, Python, HTML
- **Tools:** MongoDB, ReactJS, NextJS, Node, ExpressJs, CSS, JavaScript, PHP, MySQL
- **Core Courses:** Data Science, Fluid Mechanics, Computational Fluid Dynamics, Process Equipment Design, Mechanical Operations
- **Professional Skills:** Data Structures and Algorithm(DSA), Soft programming, Database Management System(DBMS), Object Oriented Programming(OOPs), MySQL
- **Mathematics:** Probability and Random Processes, Multivariable Calculus, Linear Algebra, Complex analysis

POSITION OF RESPONSIBILITIES (PORS)

- Selected as the **Technical Secretary, Students' Gymkhana, IIT Patna** and bagged 7th rank in INTER IIT TECH MEET 11.0.
- **Coordinator** in FlagShip Events, Celesta. Responsible for conducting robotics events.