



Navneet

Roll No.:23035010344

B.Sc. (Hons.) - Data Science and Artificial Intelligence

Indian Institute Of Technology, Guwahati

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Github

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Sc. (Hons.)	Indian Institute of Technology, Guwahati	7.95 (Current)	2023-Present
Senior Secondary	HBSE Board	84.0%	2023
Secondary	HBSE Board	94.6%	2020

EXPERIENCE

- Research Intern | Facial Emotion Recognition | IIT Guwahati** Mar 2026 - Present
Facial Emotion detection using Handcrafted and CNN Features Github
 - Conducting comparative analysis of handcrafted and deep-learning feature extraction techniques for Facial Emotion Recognition across **4 benchmark datasets**: JAFFE, CK+, FER2013, and KDEF.
 - Implemented and evaluated **3 handcrafted feature descriptors** — HOG, LBP, and SIFT — with SVM classifiers, benchmarking their effectiveness for facial emotion classification.
 - Developed deep-learning pipelines using 2 pretrained CNN architectures, **VGG16 and MobileNet**, and investigated hybrid feature-fusion approaches combining handcrafted and deep visual representations.
 - Designed systematic model comparisons using **accuracy, precision, recall, and F1-score** to evaluate feature representations and identify approaches that improve emotion classification performance.
 - Tools**: Python, Feature Engineering, OpenCV, Scikit-learn, TensorFlow, HOG, LBP, SIFT, SVM, VGG16, MobileNet
- Trainee Business Analyst | Physics Wallah** Oct. 2024 - Mar. 2025
Inventory Management System Bengaluru, India
 - Analyzed inventory, asset-allocation, and expenditure data across **5+** operational categories including inbound/outbound movement, stock levels, employee assignments, returns, and defective assets using Python .
 - Performed data cleaning, transformation, **EDA**, and **KPI** analysis and developed **Power BI dashboards** to visualize inventory trends, asset utilization, expenditure, and operational performance for stakeholder reporting.
 - Built and maintained **3+** analytical trackers/reports with structured data models, validation rules, and consistency checks, improving data reliability and reducing manual errors in recurring reporting workflows.
 - Transformed raw operational data into interactive visualizations and KPI-driven reports, enabling stakeholders to identify inventory discrepancies, track asset movement, and support data-driven operational decisions.
 - Core Skills**: Python, Pandas, Numpy, Power Bi, Power Query, Advanced Excel, Decision making, Problem Solving

PROJECTS

- SVM-Based Hybrid Feature Fusion for Emotion Recognition** Jul. 2026
Prof. Ritika Jain Github
 - Developed a hybrid facial emotion recognition pipeline combining handcrafted **HOG features** with deep representations extracted from 2 pretrained CNN architectures: VGG16 and MobileNet.
 - Implemented feature-fusion pipelines with SVM classifiers and evaluated handcrafted, deep, and hybrid representations across **4 benchmark datasets**: JAFFE, Raf-Db, FER2013 and CK+.
 - Proposed a weighted HOG-VGG16-MobileNet fusion and a 0.6 threshold, achieving **92.02% accuracy** on JAFFE, and evaluated model performance using accuracy, precision, recall, and F1-score.
- Region-Based Facial Analysis for Emotion Recognition** Github
 - Analyzed 2 facial regions (upper and lower face) using HOG features and linear SVM classification across JAFFE and CK+, comprising 1,194 images across 7 emotion classes.
 - Extracted **2,160-dimensional** HOG representations per facial region and compared region-wise performance against full-face representations using **stratified train/test** evaluation.
 - Achieved **88.37%** accuracy on JAFFE using lower-face HOG features and **99%** accuracy on CK+ using lower-face HOG, while performing emotion-wise regional analysis to identify the most informative facial regions.
- Content-Based Movie Recommendation System** Github
Project
 - Built a content-based movie recommendation system by preprocessing movie metadata and engineering unified textual representations from attributes such as genres, keywords, cast, crew, and plot information.
 - Applied text vectorization and cosine similarity to retrieve the **Top-5** most similar movies for a selected title based on content similarity.
 - Developed an interactive Streamlit application to provide movie search and recommendation functionality through a user-friendly interface.

- **Vendor Performance Data analytics**

- Collected, cleaned, and transformed vendor performance data using SQL and Python, engineering KPIs for delivery timelines, quality scores, and compliance rates.
- Built an interactive Power BI dashboard around 3 core performance dimensions to compare vendors, identify underperformers, and track operational improvements.
- Standardized data preparation and reporting workflows using reusable transformations and validation checks to improve consistency of stakeholder reporting

TECHNICAL SKILLS

- **Programming:** Python, Java , C++*
- **Machine Learning & AI:** Machine Learning, Deep Learning, Computer Vision, Feature Engineering, Data Analytics, Model Evaluation, SVM, CNN,AI,Natural language processing
- **Libraries Frameworks:** TensorFlow, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib, Seaborn
- **Data Analytics Visualization:** SQL , EDA, ETL, Statistics, Data Cleaning, Power BI
- **Tools :** Advanced Excel, VS Code, Github
- **Web Deployment:** Html, Css, Flask, Streamlit , MYSQL
- **Operating Systems:** Windows, Linux (Ubuntu), Mac

KEY COURSES TAKEN

- **Mathematics:** Linear Algebra, Probability and Statistics
- **Data science:** Data modelling and visualization , Machine Learning Fundamentals, Python , Deep learning

ACHIEVEMENTS

- **D2C Hackathon**,Secured 2nd runner up position in the hackathon organised by PW. <https://kalistee.vercel.app/>
- **Trylytics Hackathon**,Secured 2nd Runner-up in a data analysis dashboard hackathon organized by the Data Science Club.
- **School Topper – Class 10**,Secured 1st position in school with 94.6%
- **KPL Kabaddi Champion**,Won the Kabaddi tournament as a member of the winning team at IIT Guwahati

ADDITIONAL INFORMATION

- **Languages**, Hindi (Native), English (Professional Proficiency)
 - **Interests**, Data-Driven Problem Solving, Emerging Technologies, AI and automation
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