

# SHIVANSH GUPTA

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## EDUCATION

<b>Indian Institute of Technology (ISM), Dhanbad</b>	<b>2023</b>
<i>B.Tech, Petroleum Engineering</i>	<i>7.83 GPA</i>
<b>Nalanda Academy, Kota</b>	<b>2018</b>
<i>Senior Secondary - 12th</i>	<i>87.6%</i>
<b>St. Mary's Senior Secondary School, Banda</b>	<b>2016</b>
<i>Secondary Education - 10th</i>	<i>10 GPA</i>

## RESEARCH EXPERIENCE

<b>Indian School of Business (ISB), Pre-Doctoral Researcher</b>	<b>Dec'24 - Ongoing</b>
<i>Department: Information Systems Advisor: <a href="#">Prof. Vasundhara Sharma</a></i>	<i>Hyderabad</i>

- Conducting a research project on the impact of social movements in the digital world, working on the Github Dataset to assess the impact of LLMs and another project simulating a virtual environment to curb the spread of misinformation in social networks.
- Proposed and developed original research ideas, with several tested through preliminary trials and others pending further exploration
- Designed dynamic surveys with different question types and randomisations on Qualtrics
- Supported supervisor's research by performing data scraping (Selenium), cleaning, analysis, and visualisation in Python; conducted regression analysis in STATA and simulations in R, while also applying NLP techniques and large language models (LLMs) for extracting insights from text data.
- Conducted literature reviews and kept current with research papers in information systems and marketing
- Methodologies: Econometric Analysis, Structural Modelling & Survey.

<b>Directorate General of Mines Safety (DGMS), Project Intern</b>	<b>Aug'22 - May'23</b>
<i>Advisor: <a href="#">Prof. Siddharth Aggarwal</a></i>	<i>Dhanbad</i>

- Developed data scraping model using re & NLTK libraries for text mining & extracting numerical data from yearly mine fatality PDF reports.
- Created a comprehensive MySQL database to store mine fatality records, enabling effective data processing with pandas.
- Facilitated a comprehensive analysis of root causes of fatalities through data visualization using Plotly and Matplotlib in Python.

<b>Indian Institute of Management (IIM) Udaipur, Research Intern</b>	<b>May'21 - Jul'21</b>
<i>Advisor: <a href="#">Prof. Ashish Galande</a></i>	<i>Udaipur (Remote)</i>

- Created a structured dataset of Fortune 500 companies' tweets through web scraping using Twint and Scrapy in Python to analyse CSR activities and study principles of conscious capitalism.
- Utilised text analysis and NLP techniques to compute lexical diversity and sentiment scores using NLTK and VADER libraries.
- Preprocessed and vectorised text, and leveraged sentiment scores to develop a sentiment analysis model using RNN in TensorFlow.

## RESEARCH

### Research Interest

My research interests lie in understanding how digital platforms shape user behaviour, economic incentives, and societal outcomes, with a focus on platform governance and algorithmic bias. I aim to use large-scale data to uncover structural inequities and inform the responsible design of digital systems.

### Work In Progress

- Effects of Social Media movements on actual change in bias among students Advisors (with [Prof. Vasundhara Sharma](#), [Prof. Deepa Mani](#), [Prof. Aditya Karanam](#)).
- The Generative AI Dilemma: Enhancing Productivity while Managing Technical Debt in Open Source Development (with [Prof. Vasundhara Sharma](#), [Prof. Aditya Karanam](#)).

### Research Assistance

- Platform Design to Curb Misinformation (with [Prof. Vasundhara Sharma](#), [Prof. Ashish Agarwal](#), [Prof. Anitesh Barua](#)).
- Hidden Ads in YouTube Kids Videos and the Impact of Platform Policy Changes (with [Prof. Vasundhara Sharma](#), [Prof. Sumeet Kumar](#)).

### Conferences

- [Himanshu Shekhar](#), Shivansh Gupta, [Prof. Siddharth Aggarwal](#)(2019). Automated Analysis through Natural Language Processing of DGMS Fatality Reports on Indian Non-Coal Mines. In the 4th International Conference on Information Systems and Computer Networks.

### Patents

- Method and System for Classifying and Detecting True Well Control Events During Drilling Operations. (with [Jaspreet Singh](#), [Somnath Das](#), [Idris Kagdi](#)). Indian Patent Office, Patent No. 202311057956. Status: Published, Under Review

## INDUSTRY EXPERIENCE

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### HCLTech, Data Scientist

Jul'23 - Nov'24

Clients: *Chevron, ExxonMobil*

Bangalore

- Worked with the AIOps team to develop a supervised ML model analysing Azure Virtual Desktop logs to predict issues and automate L1 support processes.
- Built a Generative AI app using GPT-3.5 Turbo, LangChain, and Azure ML to extract structured insights from oil & gas daily drilling reports and convert them into OSDU-compliant JSON.
- Managed data pipelines and dashboards for asset management across 800+ oil & gas wells using Azure Databricks, Power BI, and in-house tools.

### HCLTech, Machine Learning Intern

May'22 - Aug'22

Noida (Remote)

- Developed an adaptive ML-based alarm system using Random Forest to detect kicks and blowouts in oil & gas wells, trained on Equinor's Volve dataset.
- Designed a labelling method using daily drilling reports and lithological parameters; performed preprocessing and EDA with pandas and seaborn, and addressed class imbalance using SMOTE.
- Trained and evaluated multiple supervised models using scikit-learn and TensorFlow; patent filed (in progress) for the labelling technique. Received pre-placement offer upon internship completion.

## VOLUNTEER WORK

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### CODE: Conference on the Digital Economy

Jan'25

Volunteer

Varanasi

- Managed venue setup and operations to facilitate 20+ sessions across 3 days, ensuring smooth transitions between speakers
- Coordinated transportation logistics and schedules for visits to different sites across Hyderabad for participants

### Teaching

Summer & Winter Session 2022

SPE IIT (ISM) Student Chapter

- Designed a course and taught Machine Learning, Data Science, and Python programming with practical applications to petroleum engineering to First Year Joiners at Society of Petroleum Engineering, IIT (SIM) Dhanbad (2021)

### Kartavya, IIT (ISM) Dhanbad

2020 - 2022

NGO Volunteer

- Taught mathematics to class 9th and 10th children in Dhanbad to help them ace their board exams.

## RELEVANT COURSEWORK

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### PhD Level Coursework

Credited at ISB, Hyderabad

- Multivariate Statistics A, Econometrics A

### Undergraduate Coursework

Credited at IIT (ISM) Dhanbad

- Engineering Economics & Finance, Object Oriented Programming, Data mining, Financial Econometrics, Operations Research, Development Economics, Fundamentals of Machine Learning, Data Analytics, International Macroeconomics and Monetary Policy, Reservoir Modelling and Simulation

## SKILLS

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- **Programming Languages:** C, C++, Python, SQL
- **Framework:** Keras, TensorFlow, Flask, Lang Chain, Gradio, PyTorch
- **Tools:** MS Excel, PowerBI, Azure Cloud (OpenAI Studio, ML Studio, Databricks, Function and Power Apps)
- **Libraries:** matplotlib, seaborn, pandas, NumPy, stats models, NLTK, OpenCV, Plotly, spaCy, Scikit - learn

## SELECTED ACHIEVEMENTS

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### *Scholastic Achievements*

- Achieved top 10th percentile, Univ.AI Data Science hackathon, displaying analytical prowess with an AIR of 96.
- Earned a Bronze medal in the Otto Group Product Classification Kaggle Competition, showcasing expertise in ML and data classification.
- Summer Undergraduate Research Fellowship, Computer Science Department, IIT (ISM) Dhanbad.
- Merit-cum-Mean (MCM) Scholarship for all 8 semesters of undergraduate studies.

### *Extra Curricular*

- Headed the SPE IIT (ISM) Student Chapter Editorial, securing the 2022 Student Chapter Excellence Award, awarded to only the top 20% of chapters globally.
- Secured 2nd position for writing and directing mono-act & 5th position in stage play as director at InterIIT Cultural Meet '22, outperforming 23 IITs.

## EXAM SCORES

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- IIT JEE, Advanced - 2019: AIR 7586, 95.3 Percentile among 1.9 Lakh candidates.
- IIT JEE, Mains - 2019: AIR 5497, 99.52 Percentile among 11 Lakh candidates.
- CAT - 2023, 98.06 Percentile
- GRE - 2025, (x/340) y Percentile

## REFERENCES

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### **Vasundhara Sharma**

Assistant Professor, Information Systems  
Indian School of Business, Hyderabad  
Email: [vasundhara.sharma@isb.edu](mailto:vasundhara.sharma@isb.edu)

### **Deepa Mani**

Deputy Dean, Professor, Information Systems  
Indian School of Business  
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### **Aditya Karanam**

Assistant Professor, Information Systems  
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### **Jaspreet Singh**

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