

Eshan Sengupta

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Summary:

AI Systems graduate student with experience in machine learning, statistical analysis, and SQL data pipelines. Published researcher with 14 peer reviewed papers and hands on experience applying predictive models and exploratory analysis to enterprise datasets. Strong background in Python based analytics, forecasting models, and data driven decision support.

Skills:

Data Science and Machine Learning: Python ecosystem, Pandas, NumPy, Scikit learn, Machine Learning, Time Series Forecasting, Machine Learning Pipelines, NLP fundamentals, GenAI, Statistical Analysis, Data Cleaning, Exploratory Data Analysis

Data Analysis and Visualization: Data Analysis, KPI Analysis, Power BI, Dashboarding, Tableau concepts, Data Visualization, Systematized Reporting

Programming and Data Technologies: SQL, PL SQL, Oracle APEX, Database Management, REST APIs, Git

Business Analysis: Requirements Elicitation, Business Process Mapping BPMN 2.0, User Stories, Gap Analysis, Stakeholder Management, UAT Execution, B2B and B2C Business Models

Tools and Platforms: Jira, Oracle EBS, Azure DevOps basic, Microsoft Office, Google Workspace

Research and Policy Analysis: Quantitative Research, Literature Review, Academic Publishing, Statistical Reporting, Policy Relevant Analysis

IT and Systems Knowledge: Agile Scrum, SDLC, IT Troubleshooting, Cybersecurity

Education:

Master's Degree, Artificial Intelligence Systems Expected Graduation: 2027
VILNIUS TECH – Vilnius Gediminas Technical University, Vilnius, Lithuania

- Relevant Coursework: Intelligent Systems, Mathematical Modeling, Signal Processing, Real-Time Systems.

Bachelor of Technology, Computer Science October 2020 – May 2024
Guru Nanak Dev University, Amritsar, India

- Awarded a fully funded Government of India scholarship.
- Served as Student Member of the Foreign Students Committee.
- Directed international student coordination for the Department of Computer Engineering and Technology.

Professional Experience:

Role: Information Technology Intern September 2024 – March 2025
2025BSRM (Bangladesh Steel Re-Rolling Mills), Bangladesh

- Built machine learning vehicle number plate recognition system to automate security data capture across logistics operations
- Developed Python based time series forecasting models to predict operational demand and support inventory planning
- Designed SQL data pipelines and automated reporting dashboards to improve analytical accuracy of operational datasets
- Conducted exploratory data analysis to identify operational inefficiencies, contributing to approximately 25 percent process improvement

Role: Trainee August 2024 – September 2024
New Technology Systems Ltd., Bangladesh

- Maintained consistent professional discipline and delivery standards throughout the training engagement

- Gained hands-on proficiency in Oracle SQL 10g/19c and PL/SQL, including query optimization, stored procedures, and triggers
- Managed structured database operations to ensure accurate data retrieval and reporting consistency
- Extracted actionable insights using Oracle and Oracle APEX by building interactive dashboards and computerized data workflows for business users

Role: Graduate Engineering Trainee

January 2024 – June 2024

Deepesh Cyber Developers, India

- Developed modules for PHP based billing and HR management systems aligned with documented business requirements
- Supported transaction processing systems and Android application components, improving system stability during deployment cycles

Projects

- **Predictive Sales Forecasting Model**

Built Python time series forecasting model using historical sales data to generate demand predictions and support operational planning.

- **ML Vehicle Recognition System**

Developed computer vision based system to automate vehicle identification and data logging using machine learning techniques.

Voluntary Leadership Roles:

Illustrated sustained leadership and community-building impact through technical advocacy and event operations.

- Microsoft Learn Student Ambassador 2023 – 2024 | India
- Head of Operations – CodeDay Amritsar June 2023 – July 2023 | India
- Google Developer Student Clubs - AI/ML Lead 2022 – 2023 | India
- GeeksforGeeks GNDU – Student Chapter Lead 2022 – 2024 | India

Certifications:

- SQL (Intermediate) Certificate – HackerRank
- Junior Cyber Security Analyst Path – Cisco Networking Academy
- Fortinet Certified Associate in Cybersecurity – Fortinet
- Selenium Essential Training – LinkedIn Learning
- LambdaTest Test Automation Professional Certificate – LambdaTest

Research & Publications

- "AI-Based proactive framework for protecting farm animals from nocturnal predators" (2026) | *European Journal of Wildlife Research, Springer*.
- "Artificial intelligence inspired IoT-fog based framework for generating early alerts while train passengers traveling in dangerous states" (2023) | *Multimedia Tools and Applications, Springer*.
- "Sustainable Development Goal for Quality Education (SDG 4): A study using genetic algorithms" (2022) | *Education and Information Technologies, Springer*.
- "Preventing sexual violence at public toilets... with the improvisation of gender recognition from gait sequences" (2023) | *Soft Computing, Springer*
- "An Exploration into Artificial intelligence based advancement in education field" (2022) | *ICACITE Conference Paper, IEEE*.