HERO BALA

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Enthusiastic Master's student in Open Informatics with a strong interest in Natural Language Processing (NLP) and applied AI. Currently building experience through hands-on projects such as TrendSense, a text mining and topic modeling tool for real-time trend detection. Skilled in Python, data analysis, and automation, with growing expertise in machine learning libraries (BERTopic, Hugging Face, OpenAI APIs). Eager to apply academic knowledge and project experience to real-world challenges in AI research, NLP, and Large Language Models. Highly motivated to learn, experiment, and contribute as an AI Intern while developing a long-term career in artificial intelligence.

Areas of Interest

- **AI & NLP:** Text preprocessing, sentiment analysis, topic modeling, exploratory data analysis, LLM prompt design.
- **Programming & Automation:** Python (Pandas, NumPy), automation scripts, PowerShell, Git/GitHub workflows.
- **Machine Learning Tools:** Hugging Face Transformers, BERTopic, spaCy, NLTK, OpenAI APIs.
- **Data Analysis & Visualization:** SQL (MySQL, PostgreSQL), Power BI, Excel (Pivot, Power Query), reporting dashboards.
- **Software & Engineering Basics:** MATLAB, AutoCAD (basic), documentation and technical reporting.
- **Collaboration & Communication:** Analytical thinking, problem-solving, teamwork, storytelling of technical results.
- **Languages:** English (Advanced), Czech (Basic).

Experience

Lecturer Assistant (Electronics & IT Systems)
North Western University, Khulna, Bangladesh | Mar 2022 – Jun 2022

- Assisted in preparing and delivering lectures on electronics and IT systems.
- Supported students in lab sessions and small projects, focusing on system monitoring and documentation.
- Gained experience in technical communication and mentoring.

Electrical Engineer (Trainee)
AMC Knit Composite Ltd., Dhaka, Bangladesh | Feb 2021 – May 2021

- Supported routine checks on electromechanical systems and assisted with basic troubleshooting.
- Helped document measurement records and reports for internal quality monitoring.
- Learned practical applications of root-cause analysis and preventive measures in an industrial setting.

Education

Mendel University, Brno — *Master's in Open Informatics* (2023 – Present)

- Focus: Artificial Intelligence, Natural Language Processing, Data Analysis, and Automation.
- Coursework and projects include machine learning, text mining, and applied informatics.

Gopalganj Science and Technology University, Bangladesh — *B.Sc. in Electrical & Electronic Engineering (EEE)* (2016 – 2020)

- Foundation in electronics, data systems, and applied engineering projects.
- Built strong analytical and problem-solving skills, later transitioned into informatics and AI applications.

Related Projects:

Name	Description	Technologies Used	GitHub Link
TrendSense	A real-time Reddit monitoring tool that detects trending topics and sentiment using NLP and topic modeling. Ideal for public opinion and market trend analysis.	Python, Reddit API, BERTopic, Pandas	https://github.com/HeroBala/TrendSense
StitchWatch	A maintenance tracking tool for monitoring machine issues, reporting faults, and supporting preventive maintenance scheduling in manufacturing.	TypeScript, JavaScript, CSS Modules	https://github.com/HeroBala/StitchWatch
Automation Scripts	A Python-based toolkit for automating daily operations such as file handling, reporting, and GitHub repository management.	Python, Pandas, GitHub CLI, OS Module	https://github.com/HeroBala/automation-scripts