

Shawon Kumar Mondal

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in LinkedIn | 🗣️ Hugging Face | 🌐 Portfolio

SUMMARY

Results-driven AI specialist with 2+ years of experience deploying ML models to automate workflows and extract insights. Proven ability to deliver data-driven solutions (Python, TensorFlow, Langchain) with measurable impact. Fluent in English, conversational German (B1).

EXPERIENCE

AI & Data Analyst Intern | MEKOS GmbH, Bremen July 2024 – August 2024

- Analyzed 100K+ transaction records using SQL and OpenStreetMap to identify patterns and trends.
- Mapped data to identify 3 high-potential zones for business expansion, contributing to strategic planning (report graded 1.0).
- **Tools:** dBeaver, Pandas, Google Maps API.

Zeugnis – MEKOS GmbH

Student Assistant (AI) | MERENTIS GmbH, Bremen July 2022 – December 2023

- Automated IT ticket generation with a Rasa chatbot, reducing response time by 30% and streamlining support workflows.
- Built a document processing pipeline using LayoutLM and Donut, cutting manual invoice processing time by 50%.
- Scraped data on 5K+ vegan products from online sources (BeautifulSoup/Selenium) to analyze consumer trends and market opportunities.
- Performed data cleaning and preprocessing for improved analysis and visualization.
- **Tools:** Python, Pandas, Selenium, Scrapy, Power BI, LayoutLM, EasyOCR.

Zeugnis – MERENTIS GmbH

Master Thesis: Reservoir Computing for Physical Layer Wireless Communication, University of Bremen, Germany September 2024 – Ongoing

- Developed a multi-layer Echo State Network (ESN) model for QAM demapping in MIMO-OFDM systems.
- Simulated CDL channel using the Sionna framework and evaluated demapper performance.
- Compared ESN-based demapping with traditional methods using Symbol Error Rate (SER) metrics.
- **Tools:** Python, TensorFlow, Sionna, MATLAB.

PERSONAL PROJECTS

Low-Light Image Enhancement using MIRnet March 2023 – December 2024

- Developed a CNN-based MIRnet model to enhance image quality in low-light conditions.
- Improved robotic arm precision by enhancing image processing quality.
- **Tools:** Python, TensorFlow, OpenCV.

Data Matrix Information Extraction with YOLOv8 August 2022 – January 2023

- Built a YOLOv8-based system to extract data matrix information from multi-page documents, significantly reducing processing time.
- Improved accuracy and speed of data extraction in industrial applications.
- Tools: Python, YOLOv8.

End-to-End Wireless Communication System Design April 2022 – November 2022

- Designed an end-to-end wireless communication system using Hamming coding, OFDM modulation, and demodulation.
- Implemented channel estimation and error correction for enhanced data reliability.
- Tools: MATLAB, Python.

EDUCATION

University of Bremen, Germany

May 2021 – August 2025

M.Sc. in Communication and Information Technology

Focus: ML for TN/NTN, 5G/6G research

Ahsanullah University of Science and Technology, Bangladesh Oct 2014 – Dec 2018

B.Sc. in Electrical and Electronic Engineering

IEEE Publication: Microstrip Antenna at 2.45GHz via Inset Feed

SKILLS

- **Machine Learning & AI:** Supervised & Unsupervised Learning, CNN, GANs, Transformers, TensorFlow, PyTorch, Azure ML.
- **LLM & Agentic AI:** LangChain, LangGraph, Rasa, Agentic Workflow Design, Prompt Engineering, Transformers, spaCy.
- **Computer Vision:** Object Detection, OCR, Layout Analysis, OpenCV, YOLOv8, LayoutLM, EasyOCR.
- **Data Engineering & Analytics:** SQL, Pandas, NumPy, Matplotlib, Power BI, Google Maps API, OpenStreetMap.
- **Tools & DevOps:** Python, MATLAB, Docker, Git, dBeaver, Hugging Face.

HIGHLIGHTS

- **Soft Skills:** Leadership, Team Collaboration, Communication, Adaptability, Problem-Solving, Analytical Thinking, Community Engagement.
- **Recognitions & Awards:** DAAD Scholarship for community contribution, JENESYS 2.0 Certification (Japan), Leadership & Environmental Certifications (Green Force), Robotics Competition Wins (Roborace, LFR).
- **Community Involvement:** Student Community Organizer (Bremen), Rover Scout (WOSM), Volunteer at Bishwo Shahitto Kendro.
- **Portfolio:** Full project and activity details available at shawonswork.de

LANGUAGES

English: Full Professional

German: B1, learning B2

Bengali: Native

INTERESTS

Street Photography, Traveling, History