

SOMA MOHANTY — Milwaukee, WI

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Graduate CS student at UWM specializing in conversational AI, NLP, and ML pipelines with hands-on experience in LLMs, RAG, and deep learning. Strong background in Python, Hugging Face, TensorFlow, and data-driven system optimization.

## EDUCATION

### Master of Science in Computer Science

GPA: 3.78/4.0, University of Wisconsin-Milwaukee

Sept 2024 – May 2026

Bachelor of Technology in Information Technology

GPA : 3.57/4.0, KIIT University, Odisha, India

2017 - 2021

## TECHNICAL SKILLS

- Programming Languages: Python, C, C++, Java, JavaScript.
- AI/ML Frameworks: Scikit-learn, TensorFlow, Keras, PyTorch, Transformers, Hugging Face.
- Data Analysis & Tools: MySQL, Snowflake, Pandas, NumPy, Matplotlib, RoBERTa, VADER.
- Other Tools & Frameworks: Hibernate, Spring, React, Ext JS, Eclipse, MIPS, IoT.

**COURSES:** Natural Language Processing; Programming for Machine Learning; Artificial Intelligence; Image Processing; Principles & Practices of User Interface Design; Intelligent User Interfaces; Text Retrieval & Applications in Biomedicine

**CERTIFICATIONS:** [Python for Data Science - AI and Development](#) , [AI for Everyone](#) , [Generative AI with Large Language Models](#)

## SELECTED PROJECTS

Optimizing Inventory and Insights for Footwear Retailers([GitHub](#))

Oct 2024 – Dec 2024

- Performed sentiment analysis using **VADER** and **RoBERTa**, combined with **LDA topic modeling**, on Amazon UK shoe reviews.
- Processed and visualized data using **Pandas** and **Matplotlib** to uncover trends in brand preference and activity suitability.
- Identified top-performing brands for specific activities like running and hiking by analyzing key concerns such as cushioning and fabric quality.
- Recommended inventory strategies aligned with **seasonal demand** and customer sentiment to reduce waste and enhance product offerings.

**Tech Used:** Python, Pandas, Matplotlib, VADER, RoBERTa, LDA

Predicting Breast Cancer Subtypes Using Machine Learning and DNA mutation data([GitHub](#))

Oct 2024 – Dec 2024

- Built a robust ML pipeline using **Scikit-learn**, **TensorFlow**, and **Keras** to classify breast cancer subtypes from high-dimensional DNA Mutation Data.
- Applied **feature selection** and improved data quality using **SMOTE** (for class balancing) and **Isolation Forest** (for outlier detection).
- Trained and compared models including **SVM**, **Random Forest**, **XGBoost**, and **LSTM**, achieving superior performance with deep learning.

**Tech Used:** Python, Scikit-learn, TensorFlow, Keras, SMOTE, Isolation Forest, SVM, Random Forest, XGBoost, LSTM

## WORK EXPERIENCE

Research Assistant – University of Wisconsin-Milwaukee, Supervisor: Prof. Dr. Susan McRoy

Feb 2025 – Present

- Conducting ongoing research on empathetic conversational AI for academic and career guidance, focusing on dialogue tone and factual accuracy.
- Comparing raw LLM vs. template-guided neural generation in professor–student dialogues.
- Built pipelines for human + LLM evaluation of accuracy, empathy, and trust.

**Tech Used:** Python, Hugging Face (T5, RoBERTa, GPT), PyTorch, Scikit-learn, RAG, Pandas.

Grader – University of Wisconsin-Milwaukee

Sept 2025 – Present

CS 395 Ethics, CS 469 Intro to Computer Security

- Evaluated assignments/exams and ensured grading fairness.
- Provided feedback to strengthen students' technical and ethical reasoning.

Associate Software Engineer II - HighRadius Private Ltd, Odisha, India

Jun 2022 – Feb 2024

- Improved **database performance** by optimizing large-scale queries using **MySQL** and **Snowflake**, and implemented custom procedures.
- Mentored and managed two interns who successfully transitioned into full-time roles.

**Tech Used:** MySQL, Snowflake, SQL procedures

Associate Software Engineer I - HighRadius Private Ltd, Odisha, India

Jun 2021 - Jun 2022

- Developed front-end components using **Ext JS**, and built robust backend services using **Java**, **Spring**, and **Hibernate**.
- Reduced workload by 30% through a data cloning solution for repetitive QA tasks.

**Tech Used:** Java, Spring, Hibernate, Ext JS, Eclipse

Technical Intern - HighRadius Private Ltd, Odisha, India.

May 2020-Jun 2021

- Designed a **payment forecasting dashboard** using **Random Forest Regression** to predict invoice payment dates.
- Developed a voice-based bot with **NLP** capabilities to answer finance-related queries.

**Tech Used:** Python, JavaScript, Random Forest, NLP, data visualization

## PUBLICATIONS & PRESENTATIONS

“Hybrid Semantic–Graph Speech Analysis for Early Detection of Alzheimer’s Disease.” Podium presentation, SEAWINDS Symposium, Milwaukee School of Engineering — Oct 24, 2025.

## LEADERSHIP & INVOLVEMENT

- Teaching Assistant, Girls Who Code (UWM Chapter)
- Mentor high school students in Python, problem-solving, and coding projects.
- Member, Society of Women Engineers (SWE), UWM
- Active participant in chapter meetings, workshops, and networking events.

Sept 2025 - Present

Sept 2025 – Present