

## SOMA MOHANTY

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Graduate CS student at UWM specializing in Conversational AI, NLP, and Applied ML. Skilled in building scalable LLM-driven systems and RAG pipelines with measurable accuracy and latency improvements. Experienced in Hugging Face, TensorFlow, and PyTorch.

### EDUCATION

#### **Master of Science in Computer Science**

Sept 2024 – May 2026

GPA: 3.78/4.0, University of Wisconsin-Milwaukee

#### **Bachelor of Technology in Information Technology**

2017 - 2021

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

### 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.

### CERTIFICATIONS:

Python for Data Science - AI and Development (IBM)

AI for Everyone (Deeplearning.AI)

Generative AI with Large Language Models (AWS & Deeplearning.AI)

### PROJECTS

#### **Optimizing Inventory and Insights for Footwear Retailers**

Oct 2024 – Dec 2024

Analyzed Amazon UK shoe reviews using VADER, RoBERTa, and LDA to uncover customer sentiment, key concerns, and activity-based brand preferences. Visualized trends with Pandas and Matplotlib and recommended inventory strategies aligned with seasonal demand to optimize stock and reduce waste.

#### **Predicting Breast Cancer Subtypes Using Machine Learning and DNA mutation data**

Oct 2024 – Dec 2024

Built an end-to-end ML pipeline using Scikit-learn, TensorFlow, and Keras to classify breast cancer subtypes from DNA mutation data. Enhanced model performance through feature selection, SMOTE balancing, Isolation Forest outlier detection, and comparison of SVM, Random Forest, XGBoost, and LSTM models.

### 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.

#### **Software Engineer I & II – High Radius Pvt Ltd, Odisha, India**

June 2021 – Feb 2024

- Improved database performance by optimizing large-scale queries using MySQL and Snowflake and implemented custom procedures.
- Developed front-end components using Ext JS, and built robust backend services using Java, Spring, and Hibernate.

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

### LEADERSHIP & INVOLVEMENT

- Teaching Assistant, Girls Who Code (UWM Chapter)  
Mentor high school students in Python, problem-solving, and coding projects.

Sept 2025 - Present

- Member, Society of Women Engineers (SWE), UWM

Sept 2025 – Present

Active participant in chapter meetings, workshops, and networking events.