

VIRUM RANKA

734-945-4256 || virum@umich.edu || linkedin.com/in/virumranka || [Portfolio Link](#) || [github](#) || Ann Arbor, MI

Master's student in Data Science building scalable software and AI systems

EDUCATION

M.S. Data Science – UNIVERSITY OF MICHIGAN, ANN ARBOR, MI	Aug 2025 - Present
B.Tech Computer Science (Data Science Specialization) UNIVERSITY OF MUMBAI, INDIA GPA: 3.89	Aug 2021 - May 2025
Relevant Coursework: Machine Learning, Deep Learning, Cloud Computing, Natural Language Processing, Time Series Analysis, Big Data Engineering	

WORK EXPERIENCE

Data Science & AI Researcher Department of Anthropology, Michigan	Nov 2025 - Present
• Designed end-to-end data preprocessing pipeline for SAPPHIRE survey data and developed a two-stage QC algorithm reducing measurement variability by 36-50% while retaining 90% of data.	
Relevant Coursework: Machine Learning, Deep Learning, Cloud Computing, Natural Language Processing, Time Series Analysis, Big Data Engineering	
Machine Learning Intern Sprect Pvt Ltd	Jul 2024 - Jan 2025
• Trained and fine-tuned Transformer models (BERT, RoBERTa) on 25K+ social media text samples, increasing the macro-averaged recall score by ~18% for multi-class user-intent classification.	
• Strategized a recommendation system to suggest personalized profile suggestions to new users, reducing the average profile setup time by up to 40% .	
• Built preprocessing pipelines for data wrangling, tokenization , automating daily ingestion of new text samples and reducing manual effort by at least 65% .	
• Automated data access for stakeholders with Python scripting, saving 7 hours of manual effort weekly.	

Generative AI Intern White Turtle Studios, Trailer Park Group	Dec 2023 - Mar 2024
• Synthesized and inpainted images weekly using Diffussion models , fulfilling the team's content and asset requests, thus boosting creative team productivity by at least 30% .	
Relevant Coursework: Machine Learning, Deep Learning, Cloud Computing, Natural Language Processing, Time Series Analysis, Big Data Engineering	
Skills & Certifications	

Languages : Python, C/C++, Java, SQL	Data Science : Pandas, Numpy, Matplotlib, SciPy, PySpark
Machine Learning: PyTorch, TensorFlow, , Scikit-learn, HuggingFace, LangChain, vLLM, OpenCV	
Automation and Deployment: AWS, Docker, Git, FastAPI, BS4, OpenAI API, AI Agents, CrewAI	
Certifications: AWS Cloud Foundations , AWS Data Engineering	

SELECTED PROJECTS & RESEARCH

LLM-Powered Knowledge Retrieval System for Research Assistant	May 2024 - Jul 2024
• Developed a RAG pipeline using LangGraph to deliver grounded answers from research manuscripts.	
Relevant Coursework: Machine Learning, Deep Learning, Cloud Computing, Natural Language Processing, Time Series Analysis, Big Data Engineering	
Skills & Certifications	
EEG-based Machine Learning model for Autism detection Link	Jun 2024 - Feb 2025
• Designed a two-stage deep learning system using CNN–LSTM on EEG signals from 34 subjects.	
• Achieved 91% recall in autism detection and applied unsupervised clustering for severity analysis.	