Arunima Maitra

arunima.maitra@colorado.edu | +1 201-724-3457 | www.linkedin.com/in/arunima-maitra

Education

University of Colorado Boulder, MS in Computer Science (GPA: 3.8/4) May 2025

- **Coursework:** Natural Language Processing, AI for Science, Computational Models of Discourse, Computational Lexical Semantics, Deep Natural Language Understanding

R V College of Engineering, BS in Computer Science July 2022

Technical Skills

Languages: Python, C, C++, Java, R, HTML, CSS, JavaScript, MATLAB

Libraries/Platforms: PyTorch, TensorFlow, Keras, OCR, MySQL, MongoDB, AWS, Docker, Git, Qualtrics

Research Experience

Graduate Research Assistant — FEMA Higher Education Program November 2024- Present
Institute of Behavioral Science, University of Colorado Boulder

- Leading the development of an LLM-driven disaster alert system using Gemini 1.5, generating personalized emergency messages while ensuring compliance with IPAWS standards
- Designing and executing an experimental study using a three-level Qualtrics survey to analyze user responses to personalized vs. standardized alerts, with ongoing statistical analysis to assess engagement, clarity, and impact on proactive action

Student Assistant — DARPA- AIDA Program November 2023- July 2024
Computational Language and Education Research (CLEAR) Lab, CU Boulder

- Supported DARPA's Active Interpretation of Disparate Alternatives (AIDA) program by extracting and categorizing critical entities from over 200 written documents
- Enhanced cross-document event consistency detection and contributed actionable analysis for decision-making processes

Researcher — Analyzing LLM-Generated Text with Dialogue Acts January 2024- Present
Natural Language Processing Group (NALA), CU Boulder

- Conducted dialogue analysis between LLaMA, Mistral AI models and human users, identifying areas for conversational improvement
- Proposed targeted prompting strategies that increased conversation relevance by over 30% during testing phases

Industry Experience

System Engineer 1 — Oracle Cerner September 2022 – July 2023
Bangalore, India

- Developed systematic approaches toward daily operations verification encompassing hardware inspections alongside software evaluations, ensuring high levels of accessibility with improved user satisfaction ratings noted post-implementation
- Tested automated alerting protocols that reduced average response time to critical incidents from over 30 minutes to less than 10 minutes, enhancing overall client satisfaction by preventing potential performance degradation issues

Data Science Intern — Digital Sherpa April 2022 – September 2022
Kolkata, India

- Built an NLP-driven automation tool for scrutinizing court orders, expediting the review process, and decreasing manual oversight time by approximately 60 hours per month within the Income Tax Department of India
- Engineered an information extraction framework using Gensim, Flair, TextBlob, and Tesseract OCR, addressing key workflow inefficiencies
- Report: Maitra, A. (2022). "Natural Language Processing in Court Order Scrutiny", International Journal of Science and Research (IJSR), Volume 11 Issue 11, November 2022, pp. 1176-1180