

MOUNIKA SIMHADRI

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PROFESSIONAL SUMMARY

Innovative Computer Science graduate student with hands-on experience in data science, software engineering, and automation. Skilled in using tools like Databricks, AWS, and Hadoop to create efficient data solutions. Proven track record in supporting students as a teaching assistant and building AI-driven applications to improve workflows. Passionate about developing scalable, impactful solutions and continuously advancing my skills in programming and machine learning.

WORK EXPERIENCE

ACARIN INC, *Data Science Intern*

Mar 2024 – Aug 2024

- Developed a **Retrieval-Augmented Generation (RAG)** system on Databricks using **Llama 2** for accurate information retrieval from large text sources, enhancing data accessibility and response accuracy.
- Fine-tuned language models to improve text generation capabilities, ensuring high-quality outputs tailored to project requirements.
- Executed **text summarization** tasks, utilizing advanced NLP models to generate concise and meaningful summaries from large documents, supporting better decision-making processes.
- Built and optimized **ETL pipelines** on Databricks to streamline data integration from diverse sources, improving data processing efficiency and enabling comprehensive insights across projects
- Collaborated with cross-functional teams to integrate **AWS S3** external locations with Databricks for seamless data storage and retrieval, enhancing data scalability and project efficiency.
- Engaged in regular performance monitoring and troubleshooting of data workflows to ensure pipeline reliability and model accuracy.

University of Maryland Baltimore County

Feb 2024 – Present

Graduate Teaching Assistant

- Collaborated with **Dr. Nick Allgood** and **Dr. Lomonaco** to teach **Software Engineering** and **Coding Theory**, providing academic support and fostering a productive learning environment.
- Held office hours to address student questions, clarify complex topics, and enhance student understanding of course material.
- Utilized **Jira** and **Bitbucket** to manage project progress and foster collaborative coding sessions, guiding students in industry-standard practices and supporting their development of **HTML, CSS, and JavaScript** skills for a solid foundation in web development and software engineering.

Graduate Orientation Advisor

Jun 2024 - Aug 2024

- Provided academic advising and registration support for new undergraduate students during orientation sessions, reviewing prior educational backgrounds, exploring major and minor interests, and helping students align their schedules with personal commitments.
- Facilitated course selection and schedule planning during Course Selection Day, ensuring each student's academic goals and workload expectations were addressed.
- Documented detailed advising notes to ensure continuity in student support services, contributing to an organized and efficient advising system for incoming students.

BANK OF AMERICA, *Senior software engineer*

Apr 2022 – Dec 2022

- Spearheaded integration of **Hadoop ecosystem components** to enhance data processing, achieving a 60% improvement in speed and enabling advanced data analytics capabilities.
- Analyzed **Autosys job dependencies** and optimized job scheduling, resulting in a 20% reduction in job conflicts and increased operational efficiency.
- Derived actionable insights from consumer data across multiple **Hadoop clusters**, using advanced data transformations and statistical methods to drive targeted marketing strategies and improve customer acquisition.
- Established a structured approach for creating and updating **Hive tables** using the Hue platform, reducing metadata errors by 30% and enhancing data reliability across projects.

SKILLS

Technical Skills: C++, C, Scala, Java, HiveQL, MySQL, Tableau, SQL, Python, JavaScript, HTML, CSS, Shell Script

Data Engineering & Visualization: Spark, Hadoop, ETL, Data Modeling, Data Cleaning, Data Integration, Data Enrichment, Data Analysis, Machine Learning, Natural Language Processing

Frameworks/Libraries/Tools: Pandas, NumPy, Databricks, Hugging Face, Tableau, MS Excel, Unity Catalog, AWS S3

Development & Project Management: Agile Methodologies, Bitbucket, JIRA, Scrum, GitHub

EDUCATION

University of Maryland Baltimore County

Baltimore, MD

Master of Science in Computer Science, GPA- 3.58/4

Jan 2023 - Dec 2024

Relevant Coursework: Data Structures and Algorithms, Intro to Data Science, Principles of Computer Security, Natural Language processing, Advanced Computer Architecture, Coding Theory, Quantum Computation, Proj Management Fundamentals, SOC.

CERTIFICATIONS AND RECOGNITIONS

- Published a patent titled "A Smart Solid Waste Management System Using Heterogeneous Blockchain," featured in India's Patent Office Journal in October 2022.
- Presented a research paper on "Smart Solid Waste Management Using Blockchain and IoT for Smart Cities" at the IEEE-iSES 2021 conference, held by the National Institute of Technology, Jaipur.
- Won the best project award in the Blockchain category at CivHacks, earning a \$1,000 prize from Protocol Labs at a global hackathon hosted by UC Berkeley in 2021.