

Ibrahim Alam

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Education

University of North Carolina at Chapel Hill

Expected May 2028 (Start: Fall 2026)

Master of Science in Computer Science (MSCS)

Focus: Machine Learning, NLP, Retrieval-Augmented Systems

Louisiana State University (LSU), Baton Rouge, Louisiana

Received May 2026

BS, Computer Science - Software Engineering | Minor: Mathematics

GPA: 4.267

Roger Hadfield Ogden Honors College

Awards and Honors: LSU Stamps Scholarship Recipient, LSU Distinguished Researcher, Tau Beta Pi Engineering Honors Society Member, LSU CXC Distinguished Communicator, LSU Tiger Twelve Member, McLaughlin Medal (highest GPA in College of Engineering), University Medal, College Honors, Summa Cum Laude

Experience

Research Assistant/Undergraduate Researcher | LSU Division of Computer Science and Engineering, Louisiana State University, Baton Rouge | Dr. James Ghawaly | AISX Lab | (September 2024 - present) | Project - PECAN (Programming Encoder Classification Analysis Network)

- Trained encoder models on 42M+ samples (319 languages), achieving 98.3% accuracy
- Built scalable training and evaluation pipelines with distributed training and hyperparameter tuning
- Conducted error analysis to identify model weaknesses and improve robustness
- Co-authoring a research paper for submission to a top-tier (A/Tier-1) machine learning conference

Machine Learning Software Developer Intern | LSU Office of Academic Affairs | (May 2025 – May 2026) | Project - MikeGPT

- Engineered a RAG system over 38,000+ documents, improving answer accuracy and relevance for 30,000+ users
- Built backend services using Python, Django, PostgreSQL, and Azure with a staging service for controlled deployment
- Designed and implemented file encryption and secure document storage pipeline for sensitive institutional data
- Built a custom agent engine for complex multi-step queries, enabling context-aware response generation
- Conducted retrieval optimization and prompt engineering, significantly improving response quality and user satisfaction

Teaching Assistant | CSC 4700 - AI and LLM Development | LSU Division of Computer Science and Engineering, Louisiana State University, Baton Rouge | Fall 2025

- Supported student teams in developing AI-centric applications with industry sponsors, providing technical guidance

Software Developer | Tri-Core Technologies LLC, Baton Rouge | (May 2024 – present) | Projects Below

- Maintained and improved .NET full-stack systems for the Louisiana Department of Insurance, reducing downtime and improving system reliability
- Delivered 10+ features and bug fixes, improving performance and operational efficiency
- Collaborated with senior engineers to diagnose issues and implement scalable solutions

Presentations

Alam I. PECAN: Programming Encoder Classification Analysis Network. LSU Roger Hadfield Ogden Honors College Undergraduate Thesis Defense. May 2026; Louisiana State University, Baton Rouge, Louisiana.

Alam I. PECAN: *Programming Encoder Classification Analysis Network*. Stanford Research Conference April 2026; Stanford University, Stanford, CA.

Alam I, Biral B, Nguyen J. *MikeGPT: Enhancing LSU with AI*. LSU Discover Day Undergraduate Research and Creativity Conference. 2025 April 25; Louisiana State University, Baton Rouge, Louisiana.

Projects

Regulatory Management System (RMS) and Employee Portal Maintenance and Development | C#, .NET MVC, SQL, JavaScript, Entity Framework, HTML, Microsoft SSMS | Summer 2024 – Present

- Enhanced RMS and Employee Portal for hundreds of employees and thousands of users at LDI, boosting productivity
- Optimized Producer Adjuster Search for faster access to regulatory data, improving user experience

Technical Skills

Programming Languages and Full Stack Development: Java, C#, C++, Python, JavaScript, SQL, ReactJS, ASP.NET MVC/Core, Django, Azure Cloud Services, Git, PostgreSQL, Cursor, Claude Code (in progress)

Deep Learning & LLM Fine-Tuning: HuggingFace, PyTorch, Weights & Biases (W&B)