# JAHNAVI PRIYA BOMMAREDDY

Athens, Georgia

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## Education

**The University of Georgia**  **August. 2023 – May 2025**
*Master of Science in Computer Science, (CGPA:3.88/4)*  *Athens, Georgia*
**National Institute of Technology Patna**  **August. 2019 – May 2023**
*Bachelor of Technology in Electronics and Communication Engineering,(CGPA: 8.83/10)*  *Bihar, India*

## Skills

**Programming Languages**: Python, Java, C, C++

**Database Management Systems and Tools**: SQL, MySQL, DBMS, Tableau, VSCode, Git, Anaconda

**Web Development**: Angular, JavaScript, HTML, CSS, Django

**Other Skills**: Data Analysis, Data Structures and Algorithms, Statistical Techniques, Machine Learning, Artificial Intelligence, Deep Learning, LLM, Red Teaming, Software Engineering, Agile Methodologies, Software Development Life Cycle, AWS (lambda,Glue,ETL,S3,RDS)Docker, Kubernetes,CI/CD pipelines, Spring Boot, Object-Oriented Design.

## Experience

**UGA CAES-Agriculture, Leadership, Edu & Communication**  **March 2024 – May 2024**
*Student Research Assistant*  *Athens, Georgia*
- Conducted data processing and statistical analyses under Dr. Peng Lu's guidance.
- Applied machine learning techniques, enhancing sentiment analysis and topic modeling accuracy by 80% on large datasets.
- Assisted in preparing results for manuscripts and collaborating on research publications.

**Test AIng Solutions Pvt.Ltd.(AiEnsured.com)**  **January 2023 – April 2023**
*Machine Learning Intern*  *Bengaluru, Karnataka*
- Enhanced image pipeline activities, improving model explainability by 20% using advanced techniques..
- Collaborated on live video feed monitoring using an object detection model, reducing false detections by 15% and increasing overall detection accuracy by 70%, contributing to enhanced academic integrity.
- Increased object detection model robustness, resulting in a 40% improvement in detection accuracy.

**Indian Institute of Technology Patna**  **June 2022 – July 2022**
*Research Intern (Remote)*  *Patna, Bihar*
- Analyzed disaster tweets with unsupervised methods, achieving a 10% increase in information extraction accuracy using VEC.

## Projects

**Cinema E-Booking System** | *Angular, MySQL, Spring Boot*
- Collaborated in a Agile environment to develop a web-based platform for booking movie tickets, featuring a user-friendly interface and admin panel for site management, reducing average response time by 20%.
- Designed and integrated a MySQL database, enhancing query response efficiency by 15%.
- Implemented backend functionalities using Spring Boot and enhanced user experience through Angular.

**Bike Store Management System** | *Django, MySQL, Python, HTML*
- Built a web-based application for managing customer orders, staff data, and inventory,decreasing manual processing efforts by 20% .
- Designed and implemented a normalized database schema (BCNF, 3NF),reducing redundancy and improving data integrity by 30%.
- Integrated MySQL with Django, boosting overall application speed by 15%.

**Red-Teaming Attacks on LLM Agents (Cactus and PaperQA)** | *LLM Agents, Red Teaming, Vulnerability Analysis*
- Designed and executed prompt injection attacks on LLM agents (Cactus and PaperQA), achieving a 50% attack success rate on Cactus and 40% success rate on PaperQA by bypassing tool restrictions and manipulating workflows.
- Conducted agent profiling, crafted adversarial prompts, and refined attacks using JailJudge and custom datasets, earning a 91.3% evaluation grade through systematic vulnerability assessment

## Publications

Published research article in Optics through Elsevier. The paper is titled 'Implementing the circularly polarized THz antenna with tunable filtering characteristics.'