

Mridul Gupta

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EDUCATION

Georgia Institute of Technology — Atlanta, GA

Master of Science in Computer Science (Machine Learning, GPA: 4.0)

Expected: Dec 2024

Bachelor of Science in Computer Science (GPA: 3.9, Dean's List, Faculty Honors)

Graduation: Dec 2023

- **Coursework:** Advanced Databases, Graduate Algorithms, Computer Systems & Networks, Intro to AI, Deep Learning, Data Visualization & Analytics, Machine Learning, Natural Language Processing, Data Structures, Cybersecurity Mgmt.

EXPERIENCE

Symbotic

Wilmington, MA

Software Engineer Intern - Control Center Team

May 2024 – Present

- Revamped the Inventory Manager application to .NET 8 Core, splitting monolithic architecture using WCF services into 10+ microservices, resulting in a 30% increase in system performance
- Redesigned 6 interactive UI screens using Blazor to dynamically load components and minimize JavaScript dependency
- Streamlined development process in 15+ components by refactoring critical business logic using dependency injection in C#
- Enhanced 5 simulation projects by contributing 25+ API service calls to validate functionality and test performance

BerkOne

Bethlehem, PA

Software Engineer Intern - Application Infrastructure Group

May 2023 – Aug 2023

- Expedited new hire request by utilizing Java, C#, ASP.NET, MS SQL Server, Bootstrap, and jQuery to create an Employee Requisition screen, moving from paper to an in-house digital system
- Implemented dynamic feature for multi-group selection across logins, greatly improving resource tracking efficiency
- Engineered 5 high-performance SPs to facilitate automated email notifications, improving responsiveness to stakeholders
- Achieved a 40% cut in load time by successfully upgrading 3 .NET Nuget applications using Azure DevOps tools

Experimental Flights

Atlanta, GA

Flight Control Team Lead - Vertically Integrated Program

Jan 2022 – Dec 2023

- Led an 8-person Agile team to develop a full-stack webapp rendering real-time drone data using AWS, Express.js, Node.js
- Designed a scalable and reliable system that efficiently manages up to 4 simultaneous ArduPilot simulations in Firebase
- Integrated QGroundControl into a BVLOS system for aerial vehicles, employing Flask API for path planning algorithm
- Implemented an Auto-report and File-reader option in the Battery Management web page using React.js, enabling real-time drone activity status monitoring and analysis, increasing drone monitoring efficiency by 80%

College of Computing @ Georgia Tech

Atlanta, GA

Database Systems & Object-Oriented Programming Teaching Assistant

Aug 2022 – Present

- Expanded the question bank by 20% and played a pivotal role in the refinement of the course autograder tests using GitLab
- Crafted 5+ entity-relationship diagrams, constructed 25+ MySQL queries, and implemented comprehensive autograder tests
- Graded and critiqued over 350 student code submissions and provided constructive feedback throughout the semester
- Provided individualized mentorship, including code review, to 40 students by teaching programming concepts in Java

PROJECTS

Game Suite Application | Android Studio, Kotlin, Java, JUnits

- Developed a 5-game Suite using Android Studio in a collaborative, Agile scrum environment with test driven development
- Led frontend development of main screen UI using Android Studio and integrated Chesslib API in Kotlin
- Produced JUnits edge test-cases for robust testing leading to a 25% improvement in app performance and error handling

Socio-Economic Data Prediction Platform | Python, Numpy, React, Jupyter, d3.js

- Trained a neural network model and a Random Forest Regression model to determine socioeconomic development levels of geographic regions based on satellite imagery using TensorFlow and UC Merced dataset
- Utilized GraphQL API to create an interactive choropleth map in React from data produced by the model
- Assembled Jupyter notebook for swift onboarding featuring model instructions, dataset examples, and key Numpy functions

SKILLS & LEADERSHIP

Technologies: Java, Python, C#, C/C++, .NET MVC, AWS, MySQL, React.js, JavaScript, Azure, REST API, Node.js, Express.js, jQuery, Angular.js, d3.js, SQL Server Management, Docker, Git, Gitlab, Linux, PyTorch, Visual Studio

On-Campus Involvement: Big Data Big Impact, Invention Studio, EBP Fraternity, India Club - Executive Board