# Meghana Basani

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GitHub   Portfolio

## EDUCATION

**North Dakota State University |MS in Computer Science |  GPA : 3.75/4.0**          Aug.2024 - May.2026

**Coursework** : *Algorithm Analysis, Software Development Processes, Data Science, Data Engineering, Artificial Intelligence*

**Jawaharlal Nehru Technological University | B.Tech in Computer Science**          Aug.2019 - May.2023

**Coursework** : *Data Structures and Algorithms, Algorithm Analysis,  Software Engineering, Compiler Design, Computer Vision, Machine Learning, Database Management, Operating Systems, Computer Networks, Distributed Systems*

## EXPERIENCE

**AGDA(NDSU)|**Fargo, USA          April.2025 - Present

*Software Development Intern | REST APIs, SQL, Postgres, R, API Testing, Postman, DBMS, MVC, Azure devops*

- Engineered a unified API by consolidating multiple service functionalities, integrating database logic with PostgreSQL and performing thorough testing using Postman for reliability and scalability.

**CCAST (NDSU)** |Fargo, USA          Jan.2025 - June.2025

*Software Intern | Linux, High process computing, Docker, Aptainer, Podman*

- Involved in a project in collaboration with the NDSU Agricultural Data Analytics (AgDA) and the USDA SCINet program, to deploy and test drone imagery analysis tools on CCAST and USDA high performance computing (HPC) clusters.
- Automated deployment workflows and containerized research tools using Docker and Podman, reducing setup time on HPC clusters.

**GEP** |Hyderabad, India          Aug.2023 - Jun.2024

*Associate Software Engineer | C#, .NET, REST APIs, SQL, Angular, JavaScript, HTML, CSS, Cypress Automation, Unit Testing*

- Designed and implemented the end-to-end flow for Delta Migration Tool using MEAN stack, **reduced time taken by 50%.**
- Identified, troubleshooted, and resolved UI and API bugs, improving application stability and user experience.
- Ensured the **quality and robustness** of modules by implementing **unit testing** and developing an **automation testing suite** using **Cypress**, achieving **100% test case coverage**.
- Actively participated in code reviews and completed multiple user testing cycles to ensure features work for all user types.

**DXC** |Hyderabad, India          May.2023 – Aug.2023

*Software Intern | Azure, Apache Web Servers, Azure Virtual Machines, Networking, Putty*

- Deployed and managed **10+ Azure Virtual Machines** across multiple regions, ensuring high availability and scalability.
- Established **secure data transfer** between virtual machines and on-premise servers, boosting data integrity and uptime
- Gained hands-on experience in **network security**, working with firewalls, load balancers, and Apache web servers.

## PROJECTS

**E-Laundry Services**          Jan.2023 – Nov.2023

*Journal: International Journal of Analytical and Experimental Modal Analysis (IJAEMA)*

- Developed a feature-rich Android application to connect users with local laundry providers, streamlining orders and tracking.
- Implemented modules for **real-time notifications**, **order status updates**, and **ratings system** to enhance user engagement.
- Designed a three-tier architecture (Admin, Provider, User) for efficient access and workflow control.

**Monitoring Water Quality using Machine Learning Algorithms**          Jan.2023 – Apr.2023

*Journal: International Journal of Analytical and Experimental Modal Analysis (IJAEMA)*

- Conducted a systematic review to evaluate ML methods for estimating water quality parameters using satellite data.
- Implemented and tuned ML models (RF, SVM, XGBoost) to estimate water quality parameters from satellite imagery.
- Built a Python-based ML pipeline (NumPy, Pandas, Django) for data preprocessing, feature selection, and model evaluation.

**Smart Ambulance System**          Jan.2022 – Mar.2022

- Developed an Android app using Java and Firebase to detect real-time vehicle collisions through mobile accelerometer data and automatically sends emergency alerts to predefined contacts and nearby healthcare services.
- Integrated Google Maps API to send real-time GPS location to emergency contacts, nearby hospitals, and ambulance services.
- Implemented role-based modules for users, ambulance drivers, and admins, enabling dynamic request management and location tracking.

## TECHNICAL SKILLS

**Programming Languages**: Java, C++, C#, Python, JavaScript, HTML, CSS, Angular, OOPS, Node.js, Bash Scripting, R.
**Databases/Frameworks/Libraries**: Postgres, SQL, MySQL, REST, .NET, MongoDB, NumPy, Pandas.
**Tools/Technologies**: Jira, Git, Azure, Agile, SDLC, Azure VM, Apache Web Servers, CUDA, Cypress, Azure devops, Postman, Swagger API, VS code, Putty.

## LEADERSHIP/VOLUNTEERING

**Teaching Assistant**: Led Physics and Astronomy lab sessions, delivering instruction and supporting students in experiments.
**Research Assistant**: Applied ML techniques in a research project in the Electrical and Computer Engineering department.
**Member - Techmaniacs**: Organized various events and technical activities of the technical club of JNTU - Techmaniacs.
**Student Associate, College Dining Services**: Delivered efficient customer service in a collaborative, team-oriented environment

## CERTIFICATIONS

- Docker Foundations Professional Certificate - Docker
- Microsoft Azure AI Essentials Professional Certificate - Microsoft
- Ubuntu Linux Professional Certificate - Canonical
- GitHub Professional Certificate - GitHub
- Python for Data Science & Analytics - Coding Ninjas
- Java - Digi Saksham Program by Ministry of Labour & Employment and Microsoft on Essentials.
- Postman API Fundamentals Student Expert- Postman