

Mahima Nandana K

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PROFILE

I am a Computer Science and Mathematics undergraduate at BITS Pilani with a passion for solving real-world business and societal problems through technology and structured thinking. Chairperson of ACM-W, actively mentoring peers and building inclusive technical communities. Interested in building scalable solutions and continuously exploring software engineering, AI/ML, data-driven solutions and technology consulting.

EDUCATION

Birla Institute of Technology And Science - Pilani	Hyderabad Campus
<i>B.E. Computer Science and M.Sc. Mathematics— CGPA:8.71</i>	2023 – Present
Relevant Coursework: Object-Oriented Programming (Java), Probability & Statistics, Linear Algebra, Real Analysis, Operations Research, Data Structures	

EXPERIENCE

SDE Intern– Indium Software	May 2025 – July 2025
<i>Interactive Data Insights Bot using Data Science + MCP</i>	
<ul style="list-style-type: none">Built an automated data analysis pipeline transforming raw datasets into actionable insightsIntegrated FastAPI backend, workflow automation, and LLM-based insight generationEnabled real-time delivery of analytics and visualizations through collaboration platforms	

RESEARCH/Academic Projects

Adaptive Learning with Gamification (Laboratory Project)

Faculty Mentor: Prof. P T V Praveen Kumar

- Studied adaptive learning systems incorporating dynamic difficulty adjustment mechanisms
- Analyzed the role of gamification in improving learner engagement and learning outcomes
- Derived design insights to balance educational effectiveness with long-term motivation
- Connected theoretical learning models with system design considerations for adaptive platforms

Algebraic Structures and Proof-Based Reasoning (Study Project)

Faculty Mentor: Prof. Pratyusha Chattopadhyay

- Developed structured approaches to constructing and validating mathematical proofs
- Explored core algebraic structures through rigorous, proof-based reasoning
- Strengthened logical reasoning and mathematical rigor through theoretical problem solving

TECHNICAL PROJECTS

E-commerce Web Application | Java, SQL, HTML/CSS| GitHub

- Developed a full-stack e-commerce platform supporting customers, retailers, and wholesalers
- Implemented OTP-based email authentication and role-based access control
- Built core features including product browsing, cart management, checkout, and order tracking
- Designed backend logic with modular and object-oriented principles for scalability

Queueing System Analysis – Library Stationery Shop | Queueing Theory, Mathematical Modeling

- Collected real-world data and modeled the system using M/M/1 queueing theory
- Computed performance metrics including arrival rate, utilization, waiting time, and queue length
- Analyzed system bottlenecks and service efficiency under varying demand conditions
- Proposed operational improvements to reduce customer waiting time and congestion

LEADERSHIP & RESPONSIBILITY

Chairperson – ACM-W

BITS Pilani, Hyderabad Campus

- Leading the student chapter by planning technical initiatives and mentoring junior members to boost women's participation in tech through coding workshops, events and projects.

Operations Lead – SWMC (Student Welfare and Mentorship Committee)

BITS Pilani, Hyderabad Campus

- Led planning and coordination of student events, taking ownership of execution and ensuring smooth on-ground operations

Member – BITS Hyderabad Consulting Group (BHCG)

BITS Pilani, Hyderabad Campus

- Worked on structured consulting problem-solving and contributed to a project analyzing sustainability strategies in the airline industry, backed by Inspire Infosol

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, MySQL, JSON, HTML/CSS

Tools and Frameworks: FastAPI, Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm, TensorFlow, IntelliJ, Eclipse, HuggingFace, Exploratory Data Analysis

Libraries: pandas, NumPy, Matplotlib, Seaborn