# MYAN GUPTA

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## EDUCATION

**University of Minnesota - Twin Cities** **September 2023 - May 2026**
*Bachelor's, Computer Science* *GPA: 3.8*

## PROFESSIONAL EXPERIENCE

**University of Minnesota - Twin Cities** **Minneapolis, MN, USA**
*Teaching Assistant* *September 2024 - Present*

- Mentored over 100 students in Java programming, focusing on time complexity analysis and algorithmic optimization, leading to a 20% improvement in overall class performance
- Developed and executed engaging lab exercises on advanced topics like Dynamic programming and graph algorithms, contributing to a 25% boost in student lab scores
- Introduced personalized feedback sessions for code reviews, helping students refine their problem-solving techniques and achieve a 40% decrease in logic errors in their assignments.

**University of Minnesota - Twin Cities** **Minneapolis, MN, USA**
*Programming Tutor* *January 2024 - Present*

- Empowered over 50 students to excel in data structures, algorithms, and object-oriented programming, driving a 25% improvement in overall course performance
- Revamped existing practice problems by incorporating real-world coding challenges, enriching student learning experiences and promoting deeper comprehension of complex concepts.

## PROJECTS & OUTSIDE EXPERIENCE

**Smart Scheduling API for Meetings and Availability** *September 2024 - Present*

- Developed and Deployed a scalable appointment scheduling API using FastAPI, reducing development time for similar projects by 30%.
- Designed modular CRUD operations for user and meeting management, improving code reusability and reducing bug incidence by 20%.
- Implemented Pydantic models for robust schema validation, ensuring 100% compliance with API input/output specifications.
- Optimized database queries for user and participant data retrieval, reducing API response times by 40%.
- Integrated RESTful endpoints with clear documentation, improving API usability for client teams and reducing onboarding time by 50%.
- Engineered automated redirects to API documentation, increasing accessibility and reducing manual setup effort by 10 hours monthly.

**Minefield: Custom Minesweeper Implementation**

- Engineered a customized Minesweeper game, "Minefield," leveraging stack and queue data structures, resulting in a game that processes user input and updates the game state in under 50 milliseconds.
- Architected a two-dimensional array to represent the game field, with each cell indicating the number of surrounding mines or containing a mine, supporting game grids up to 100x100 cells.
- Reduced average game processing time by 30% through algorithmic optimizations, enhancing the overall user experience.

**Fractal Machine: Fractal Drawing Application**

- Constructed an application to generate fractal patterns using Java, integrating shape classes (Circle, Rectangle, Triangle) and a recursive drawing algorithm, supporting recursion depths up to 10 levels.
- Designed classes for each shape, computed their geometric properties, and rendered complex fractal patterns with adjustable recursion depth and color variations, achieving frame rates of 30 FPS for real-time rendering.

## SKILLS

**Skills:** Python, Java, Adobe After Effects, JavaScript, OCaml, Data Structures & Algorithms, HTML/CSS, AWS, Microsoft Azure, FastAPI