Ayushi Saigal

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EDUCATION

University of Wisconsin-Madison — May 2025

Bachelor of Science: Electrical Engineering with specialization in Machine Learning and Data Science
- **Minor:** Computer Sciences
- **Coursework:** Linear Algebra || Data Science || Random Variable Probability and Statistics || Matrix Methods in Machine Learning || Signal/Image Processing

TECHNICAL EXPERIENCE

Data Science and Analytics Intern — June 2024 – Present

Bennett Coleman — *Delhi,IN*
- Working in the **Business Intelligence** team,implemented **advanced Python scripts** that automated the collection and preprocessing of datasets exceeding 500000 rows, reducing manual data entry efforts by 75%.
- Created complex **SQL queries and used Excel functions** (e.g., pivot tables, VLOOKUP) to extract and analyze data from multiple databases, uncovering key trends that improved decision-making accuracy.
- Built interactive dashboards and reports in **PowerBI**, integrating data extracted from websites with Selenium.

Machine Learning Researcher — Dec. 2024 – May 2024

Computational Optics Lab — *Madison, WI*
- Developed neural network models in **Python and PyTorch** to denoise images using only noisy data, addressing the challenge of unavailable clean images in clinical settings, and gained practical experience in machine learning.
- Improved proficiency in advanced machine learning techniques, data handling, and algorithm development, demonstrating the ability to solve complex problems in high-stakes, real-world environments.

Undergraduate Math Researcher — Sep. 2024 – Dec. 2024

MXM Lab — *Madison, WI*
- Generalized a **strategy** for three-dimensional slow K-Nim games, a type of **combinatorial game theory.**
- Developed a recursive method for determining P-positions (winning positions) and N-positions (losing positions), reducing the time complexity and improving computational efficiency of the evaluation process by 25%.
- Specialized in **pattern recognition** within game strategies, enhancing insights through data visualization tools.

Image Processing Summer Intern — June 2024 – Sep. 2024

UW Hospital — *Madison, WI*
- Applied **Fourier filtering** to reduce noise and isolate crucial image components, improving image clarity by 40%.
- Utilized thresholding techniques to convert images into binary formats, simplifying **feature identification.**
- Leveraged **MATLAB** for complex computations, streamlining the **image processing** workflow.

LEADERSHIP EXPERIENCE

VP Internal Relations | *Society Of Women Engineers* — May 2024 – Present
- Spearheaded internal communications and collaboration for over 25 SWE members, driving engagement.
- Managed logistics, attendance, and funding for national WE, WE Local and regional conferences, boosting member participation by 40% and enhancing professional development opportunities for all members.

Event Manager | *Wisconsin Union* — Feb. 2022 – Present
- Organized and managed over 25 events per day, demonstrating organizational and multitasking abilities.
- Entrusted with the managerial responsibility for all three union buildings.

Student Ambassador | *College of Engineering* — Aug. 2022 – Dec 2022
- Engage with prospective students and families by providing clear and informative campus tours, effectively communicating the benefits of the engineering program and student life to a group of over 50 people.
- Act as a point of contact for prospective students, answering questions and providing guidance.