

# Yash Sharma

Austin, TX, 78660 • 512.971.3728 • [Sharmayash263@gmail.com](mailto:Sharmayash263@gmail.com) • [LinkedIn](#) • [Personal Website](#)

## PROFILE

Data scientist and software engineer with five years of experience in data analysis, algorithmic development, and software engineering, focused on solving complex computational and systems-level problems. Experienced in applying machine learning, data analytics, and full-stack development to create scalable, research-grade tools and workflows. Built a strong foundation in computer science, high-performance computing, and applied data systems through projects spanning semiconductor analytics and real-time platforms.

## SUMMARY OF QUALIFICATIONS

- Proficient in programming and scripting with Python, C, Java, JavaScript, R, and SQL, applying these skills in algorithm design, debugging, and optimization of complex systems.
- Experienced in data analysis, machine learning, and predictive modeling, leveraging statistical methods to enhance performance, efficiency, and decision-making.
- Skilled in software and systems development with ReactJS, Node.js, PostgreSQL, and Power BI, integrating analytics with engineering workflows for end-to-end solutions.

## TECHNICAL SKILLS

- **Programming Languages:** HTML, CSS, Python, C, Java, JavaScript, Linux, SQL, R, X86 Assembly.
- **Systems/Libraries:** SciPy, NumPy, MongoDB, Pandas, Matplotlib, PyTorch, ReactJS, Scikit-learn, Git/GitHub.
- **Areas of Expertise:** Machine Learning, Data Manipulation/Visualization, Algorithm & Database Design/Optimization, Artificial Intelligence.

## EDUCATION

- Master of Science in Data Analytics and Information Systems** - Texas State University, Round Rock, TX May 2026
- Bachelor of Science in Computer Science** - Texas Tech University, Lubbock, TX Dec 2024
  - **Minor:** Mathematics

## EXPERIENCE

- Supplemental Instructor** - Texas State University, Round Rock, TX Sept 2025 - Present
  - Taught students Math (through Calc I), Physics I, and Chemistry I, helping them build strong conceptual foundations and effective problem-solving skills.
  - Supporting students during scheduled/Drop-in tutoring hours, guiding them through difficult topics and modeling strategies for independent learning.
- Guest-Lecturer** - Texas State University, Round Rock, TX Apr 2025
  - Delivered an interactive lecture, “Patterns in Pixels: What Data Reveals About AI-Generated Art” presenting data visualization and predictive modeling techniques to reveal real-world trends in the fast-growing AI art market.
- Data Analytics & Business Systems Intern** - Onsemi, Scottsdale, AZ May 2025 - June 2025
  - Analyzed semiconductor process, including BOMs, inventory management, and production workflows, to uncover trends and drive operational improvements.
  - Developed and maintained Power BI dashboards and automated reporting pipelines, increasing operational visibility and enabling data-driven decision-making for multiple teams.

## PROJECTS

- NASA, Amazon Web Services, Oak Ridge National Laboratory (HPCC) –2023 Winter Classic Invitational Student Cluster Competition,** Lubbock, TX Apr 2023
  - Operated and optimized a small HPC cluster under strict power and performance constraints, benchmarking HPL (LINPACK) & HPCG, & building/tuning the WRF (Weather Research & Forecasting) model with weekly mentorship from NASA, AWS, & ORNL; resolved performance bottlenecks, balanced workloads across nodes, optimized memory usage, & refined computational workflows to maximize cluster efficiency.
  - [Earned 3rd place nationwide \[Team Matador\]](#), outperforming teams from institutions such as California Polytechnic State University and contributing to Texas Tech’s strong national standing in HPCC competitions.
- CollaBand: Music Collaboration Platform (HTML, CSS, Python, JavaScript, ReactJS, Node.js)** - CS 4366 Senior Capstone, TTU, Lubbock, TX Aug 2024 - Dec 2024
  - Built a real-time, full-stack music collaboration platform, implementing PostgreSQL database schemas to store project data, track user activity, and synchronize edits across multiple users.
  - Created a responsive front-end with ReactJS, HTML, and CSS, ensuring seamless interaction with the backend and accessibility for all users.

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**Pac-Man Multi-Agent System Development (Machine Learning Algorithms)** - *Intro to Artificial Intelligence TTU, Lubbock, TX*

Mar 2023

- Enhanced Reflex Agent by improving the ReflexAgent to play by considering both food and ghost locations, achieving reliable performance on various layouts/applications, thereby enhancing customer accessibility and usability.
- Optimized pathfinding by implementing A\* algorithm for efficient pathfinding, significantly improving the agent's performance.
- Increased search efficiency by utilizing alpha-beta pruning to efficiently explore the minimax tree, achieving significant speed-ups in search depth on various board layouts.

**Voltage to Applied Pressure Instrument Prediction Tool (Python)** - *Computational Thinking and Data Science TTU, Lubbock, TX*

Dec 2020

- Developed a predictive tool using Python to estimate applied pressure from voltage readings, leveraging Pandas for data manipulation, visualization, and modeling on large datasets to enhance prediction reliability and inform data-driven decisions.

## ACTIVITIES / INVOLVEMENT / HONORS

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**Member** - *Indian Student Association Club, TTU, Lubbock, TX*

Sept 2020 - Dec 2024

- Attended meetings and engaging in cultural events, organizing cultural showcases, and fostering community among fellow Indian students.

**Professional Leadership Camp** - *First Year Leadership Institute, TTU, Lubbock, TX*

Nov 2020

- Met continuously for 8 weeks to develop professional behavior, leadership, communication, efficiency, and team-building skills consistent with university values.

**Member** - *Texas Tech Math Club, TTU, Lubbock, TX*

Feb 2022 - Dec 2024

- Engaged in monthly meetings and workshops to develop personal and professional mathematical, problem-solving, analytical skills within the math club, and providing students with resources for their courses.

**Hackathon Participant** - *HackWestTX, Lubbock, TX*

Sept 2023

- Developed Python-based tools for data visualization and modeling, generating interactive 2D graphs and charts to present insights.
- Designed and implemented formulas for accurate computations, translating mathematical logic into efficient, functional Python code.

**Leadership Camp** - *Marine Corps Junior Reserve Officer Training Corps, Austin, TX*

Aug 2017 - May 2020

- Earned promotions to Cadet Corporal (2018/19) and First Sergeant (2019/20), leading and mentoring a company of 20+ cadets in daily activities, lesson plans, and physical training; provided guidance and support to peers, fostering teamwork, discipline, and personal growth.
- Designed, planned, and delivered training sessions across academic, physical, and leadership domains, modeling core values of responsibility, integrity, and accountability, while helping cadets develop practical skills and confidence for both military and academic environments.

**Awardee** - *Marine Corps Junior Reserve Officer Training Corps, Austin, TX*

- Recognized for distinguished Military Training, Distinguished Conduct, Arts and academics, Longevity and Fidelity, Best Drill Cadet, Orienteering Awards.

**STEM MicroMajor Awardee** - *The University of Texas at Austin Award Austin, TX*

Feb 2020

- Honored for demonstrating initiative, time management, communication, and academic excellence across STEM coursework, reflecting dedication and high achievement in the field.