Mohid Tanveer

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EDUCATION

University of California San Diego   **September 2025 - December 2026**
M.S. Computer Science   *San Diego, CA*

- **Relevant courses**: Recommender Systems and Web Mining, Probabilistic Reasoning & Learning, Computer Security

Rhodes College   **August 2021 - May 2025**
B.S. Computer Science, Overall GPA: 3.91/4.00   *Memphis, TN*

- **Relevant courses**: Machine Learning, Artificial Intelligence, Mathematical Statistics, Statistical Analysis, Multivariable Calculus, Advanced Algorithms, Theory of Computation, Systems Programming and Computer Organization

EXPERIENCE

St. Jude Children's Research Hospital   **May 2024 - May 2025**
High-Performance Research Computing - Student Artificial Intelligence Engineer   *Memphis, TN*

- Researched and implemented an internal chatbot service utilizing a Retrieval-Augmented Generation (RAG) pipeline ensuring secure handling of internal HPC systems' info and other sensitive data within the organization, resulting in 80% reduction in frequency of ServiceDesk tickets; Utilized local LLM inference, vector stores, and knowledge graphs to improve accuracy/precision of the model within research contexts.
- Collaborated with researchers to support machine learning and AI tool development, including data preprocessing, model training, and pipeline integration for various research projects.

High-Performance Research Computing - Intern

- Created a Flask job server microservice running on a virtual machine automating the conversion of tagged image files to a SyGlass project file for researchers; Utilized Slurm for resource allocation/job scheduling. integrated the microservice with an internal imaging file-sharing service, improving workflow and productivity by erasing this task from the researchers' plates.
- Established automated network testing, data visualization, and data analysis targeting research storage from various points of St. Jude's campus; Providing for consistent testing of network resources and identifying potential points of concern within the network path, employing statistical methods and machine learning techniques such as anomaly detection.
- Initialized Splunk logging services on workstations in the Visual Lab to query logs to answer questions regarding machine utilization and display relevant metrics, providing a means to valuable business intelligence toward resource allocation.

Rhodes College Department of Computer Science   **August 2023 - May 2025**
Peer Tutor   *Memphis, TN*

- Tutored and guided ~200 (over time) introductory and intermediate Computer Science students in twice-weekly sessions
- Designed individual lessons and aid to ensure the students' success by assessing their strengths and weaknesses regarding knowledge of the relevant curriculum

PROJECTS

Tubify   **January 2025 - Present**
Web Application   *Repository Link*

- Designed a full-stack web application leveraging a Python-based FastAPI backend, React.js frontend, and PostgreSQL, enabling users to share and explore music preferences and foster connections based on musical compatibility.
- Developed a personalized recommender system that analyzes user library, friend activity, and track popularity. Designed to evolve users' music tastes, the system introduces similar and boundary-pushing tracks using collaborative and content-based filtering while adapting in real-time through feedback-driven re-ranking to balance relevance and discovery. The system leverages clustering based on musical taste to target diverse musical interests, providing accurate recommendations.
- Extracted audio features (e.g., acousticness, danceability, energy, valence) using librosa and GPU-accelerated signal processing to enrich recommendations with musical characteristics.
- Built a scalable pipeline to batch-process and persist audio features and user-specific data in a Postgres-backed system.

mohid-tanveer.github.io   **May 2023**
Portfolio Website   *Repository Link*

- Built responsive React.js website showcasing projects, experience, and technical skills, emphasizing intuitive UI/UX design.

SKILLS

Languages: Advanced in Python. Proficient in C, Java, HTML/CSS, JavaScript, and SQL. Experienced in C++ and R.
Tools: TensorFlow, PyTorch, NumPy, Scipy, Pandas, Bash Scripting, Git/GitHub, GNU/Linux, Node.js, Anaconda, VMs.
Languages: Fluent in English, Urdu, and Punjabi; Conversational Proficiency in Spanish, Hindi | **Honors:** Eagle Scout