

Yug Patel

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EDUCATION

Missouri University of Science and Technology

Bachelor of Science in Computer Science; GPA: 3.74

Rolla, MO

Aug. 2022 – Present

EXPERIENCE

Undergraduate Research Assistant

Oct 2023 – Present

Department of Biology, Missouri University of Science and Technology

Rolla, MO

- Worked under Dr. Andrea Scharf to develop a comprehensive simulation program for modeling the life cycles of *C. elegans*.
- Designed and built a web application capable of running and comparing multiple simultaneous simulations, with integrated real-time data collection and visualization.
- Implemented a data pipeline for efficient data processing and storage, enabling in-depth analysis of simulation results.
- Currently expanding the system to include the predatory organism *P. pacificus*.

NSF-REU Research Intern

May 2024 – Aug 2024

Missouri University of Science and Technology

Rolla, MO

- Contributed to the development of a testbed for assessing cognitive load in real-time using EEG and PPG sensors.
- Played a key role in integrating and synchronizing the Enobio 20 EEG headset and Polar Verity Sense heart rate monitor with a web application to ensure accurate real-time data collection.
- Led the development of both frontend and backend components for the Flanker N-Back Task and Multiple Object Tracking Task.
- Planning to develop a Convolutional Spiking Neural Network to leverage EEG/PPG data and task performance metrics to predict cognitive workload.

Undergraduate Researcher

Jan 2024 – Present

Department of Computer Science, Missouri University of Science and Technology

Rolla, MO

- Annotated disaster-related tweets with metadata including location, time, and severity for accurate evidence retrieval and claim classification.
- Assisted in developing and implementing a machine learning model to classify claims as supported, refuted, or inconclusive.
- Developed a web demo to visualize annotated tweets and model outputs, enhancing usability and understanding.

Web Developer

Jun 2023 – Aug 2023

Infosoft Systems Inc.

Overland Park, KS

- Developed responsive web pages using HTML, CSS, and JavaScript, ensuring mobile responsiveness and optimized load times.
- Collaborated closely with the design team to create visually appealing and user-friendly interfaces, resulting in a 20% increase in user engagement.
- Integrated advanced analytics features, enabling the collection of user behavior data that improved decision-making efficiency and informed design adjustments, enhancing overall user experience.

PROJECTS

Global Food Library | *Python, Flask, SQL, TailwindCSS*

September 2023

- Created a dynamic culinary platform with personalized recipe management and advanced search capabilities
- Implemented tools aiding user engagement through interactive features like ratings, custom cookbooks, and tailored dietary filters.
- Engineered a robust, secure database infrastructure with comprehensive admin controls and user authentication.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, SQL, JavaScript, TypeScript, C#, Rust

Frameworks: React, Node, Express, Flask, Django, Spring Boot

Developer Tools: Git, Docker, AWS, Linux, Kafka

Libraries: Pandas, NumPy, Matplotlib, XGboost, Scikit-Learn, SciPy, PyTorch, TensorFlow