saurabhnair.com

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EDUCATION

University of Toronto

B.Sc Computer Science & B.A Economics [Double Major], CGPA-3.75

September 2022 – June 2026

Awards: Dean's List Scholar (2022,2023,2024), University of Toronto International Scholar Award (2022), University of Toronto Scholar (2022)

EXPERIENCE

Emirates Steel Arkan

Machine Learning Intern

June 2024 - August 2024

Abu Dhabi, UAE

- Developed and implemented advanced machine learning models to optimize production processes and improve predictive maintenance, resulting in a 15% reduction in downtime and enhanced operational efficiency.
- Engineered a dashboard system using *Python-Dash* to monitor ferro alloy usage. Applied granular data analysis to construct a descriptive model, leading to an estimated reduction of \$1.2 million in operational costs for plant production
- Collaborated cross-functionally with engineering and IT teams to integrate AI-driven solutions into existing systems, demonstrating strong analytical and problem-solving skills for one of the *Middle East's largest steel companies*.

Back End Developer

May 2024– Present

San Jose, USA

Kaytoons Inc. [Startup]

- Engineered and maintained robust backend systems for *Kaytoons*, a startup based in San Jose, improving system reliability and scalability to support a growing user base, for a children's app that is going through funding.
- Implemented RESTful APIs and optimized database queries, enhancing application performance and enabling seamless integration with frontend services, and adding a *voice cloning feature using the PlayHT API system using Python*.

Residence Facilities Assistant

 $September\ 2023-Present$

UTM Student Housing & Residence Life

Mississauga, ON

- Specialized in data analysis, facility enhancements, and inventory strategies. Revitalized the Furniture Data inspection system by making it online thus improving efficiency in data-handling for over *4000 students* in Residence.
- Excelled in communication and independent work. With strong organizational skills, was able to support project launches, manage key profiles, and collaborate effectively with other organizational structures within UTM.

PROJECTS

MatherBot | React, CSS, Next.js, Material UI, OpenRouter API, Meta Llama AI

- Developed *MatherBot*, an AI-driven math assistant chatbot, using *Next.js* for the frontend and *Material UI* for a sleek, dark-themed user interface, providing real-time support to students in solving math problems effectively.
- Integrated *OpenRouter API* to enable real-time, AI-powered responses within a responsive chat interface, optimized for performance and SEO with server-side rendering, and deployed on *Vercel* for reliable and fast delivery.

Premier League Match Analysis and Prediction System | Python, BeautifulSoup, pandas, SciKit Learn

- Developed a comprehensive data pipeline to scrape and process detailed match and shooting statistics for Premier League teams across multiple seasons using *Python*, *BeautifulSoup*, and *pandas*, with data sourced from the FBref website.
- Implemented a machine learning model using a *Random Forest classifier* to predict match outcomes based on historical data, aggregating and filtering data to focus on Premier League matches, and simulating entire seasons to generate final league tables, offering insights into team performance and potential season standings.

Minds-snatcher | Java, JavaFX, Figma, Audacity, Javax.sound

- Created a user-friendly game in *Java* using *AGILE* development in sprints with controls and a user interface. Made it interactive with a display made with *JavaFX*, modeled using illustrations designed with *Figma*.
- Added sounds and voices to the game using *Audacity* and voice recordings from peers to make it personable. Integrated the voice recordings and game sounds into Java using *Javax.sound* to integrate audio files.

TECHNICAL SKILLS

Technical Languages: Java, Python, C, MySQL, JavaScript, R

Developer Tools: Git, Google Cloud Platform, PlayHT, OpenRouter, React, Node.js, Next.js, Firebase, Llama API

Libraries: NumPy, Matplotlib, SciKit Learn, Pandas, OpenCV

Languages: English, Hindi (native), Malayalam (native), Arabic (certified diploma), French (novice).