

VARUN SAHNI

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EDUCATION

Texas A&M University

Master of Science in **Computer Science**: GPA: 4.0/4.0

Coursework – Machine Learning, Artificial Intelligence, Recommender Systems, Software Engineering, Algorithms, Operating System

College Station, TX

Aug 2023 – May 2025

Delhi Technological University

Bachelor of Engineering in Electrical Engineering:

Delhi, India

Aug 2015 – June 2019

PROFESSIONAL EXPERIENCE

TEXAS A&M UNIVERSITY

College Station, Texas, US

Full-Stack Developer (React, JavaScript, Node.js)

Aug 2024 – Present

- Developed and deployed WisdomLink.io, a full-stack web application, using React for the front-end and Node.js for the back-end
- Built REST API endpoints for user authentication, registration, content management, and implemented WebRTC for live video calls

TEXAS A&M UNIVERSITY

College Station, Texas, US

Business Intelligence Developer (Python, React, JavaScript, Power BI, SQL)

Nov 2023 – Aug 2024

- Created Python scripts for data analysis and task automation, reducing operational time and enhancing data-driven decision-making
- Crafted engaging Power BI dashboards to provide insightful visualizations for informed decision-making, enabling trend analysis

BHARTI AIRTEL LIMITED

Gurugram, India

Product Engineer (Java, Postman, JIRA, Drift, SQL, Power BI, Figma, X-minds)

Jun 2019 – Jul 2023

- Introduced configurable features on the Web Application, resulting in a 13% reduction in customer handling time for support team
- Streamlined and developed new customer journeys on the Chatbot for 6 million users, reducing average service requests by 22.0%
- Innovated a network journey, integrating APIs, automating the validations, introducing auto-healing, and improving the app UI to streamline the processes, resulting in a significant 23% reduction in network service requests while also cutting overall journey time

TECHNICAL SKILLS

Languages: SQL, Python (PySpark, Pandas, NumPy, Scikit-Learn, Matplotlib, PyTorch, TensorFlow), C++, R, Java, HTML, CSS, JavaScript, React, PowerShell | **Data Visualization Tools:** Power BI, Tableau | **Frameworks:** Node, Express, Flask, Spring Boot, Git
Machine Learning: Exploratory data analysis (EDA), Feature engineering, Supervised - Regression, Classification (Logistic regression, Decision tree, KNN, Naive Bayes, Random Forest, SVM), Unsupervised - Clustering (Hierarchical, K-means, AutoEncoder), LLMs

ACADEMIC PROJECTS

Smart Job Application Auto-Fill Using LLMs (Python, JavaScript)

Nov 2024

- Developed a browser extension using LLM and a Retrieval-Augmented Generation (RAG) framework to auto-fill job applications, generating personalized responses for role-specific questions by retrieving user information and aligning it with job descriptions.

Personal AI Assistant with Local LLM Integration (Python)

Oct 2024

- Built a personal AI assistant utilizing a local LLM with Retrieval-Augmented Generation (RAG) to automate tasks such as writing and sending emails, analysing PDFs and answering questions from them, scheduling meetings, and performing web searches.

GPT-2 Language Model (C++, CUDA)

Sept 2024

- Developed and fine-tuned a GPT-2 language model using Karpathy's LLM repository for text generation tasks. Optimized model hyperparameters to enhance performance, resulting in significant improvements in HellaSwag accuracy and validation loss metrics

HeartSync: Personalized Dating App Recommender System (Python, React, JavaScript, Flask)

May 2024

- Created a personalized dating app recommender system, using NLP and collaborative filtering based on user preferences. Built a backend with Flask. Designed a React front-end app with swipe actions on profile cards for an intuitive and engaging user experience. Integrated a real-time AI chat assistant utilizing LLM to provide chat recommendations, enhancing user interactions within matches

SmartFashion: Revolutionizing E-commerce Recommendations (Python, JavaScript, Django)

Dec 2023

- Deployed an e-commerce recommendation system using large language models. Developed the backend with Django and frontend in JavaScript to create an engaging interface. Generated Image2Vec embeddings from visual features to enhance recommendations. Conducted aspect-based sentiment analysis on user reviews, highlighting the top two positive and negative for each aspect.

Library Management System (Java, Node.js)

Nov 2023

- Implemented a scalable microservices-based Library Management System using Java, MongoDB, and Redis. Developed REST APIs for seamless service communication and built both a JavaFX desktop UI and a JavaScript-based web UI for enhanced user experience