




Akshit Shukrawal

Junior Undergraduate
Department of Mechanical Engineering

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2022 - Present	B.Tech	Indian Institute of Technology, Kanpur	8/10
2022	RBSE(XII)	M B I SR SEC SCH, Kota	83%
2020	CBSE(X)	Lawrence and Mayo Public School, Kota	91%

Scholastic Achievements

- Secured **All India Rank of 3609** in the **JEE Mains 2022** exam among the 1.5 million registered candidates.
- Secured **All India Rank of 6705** in the **JEE Advanced 2022** exam among the 1.5 Lakh shortlisted candidates.
- Attained Codeforces Specialist status with a top rating of 1511 & Global Rank 1885 in Codeforces Round 951.(akshit_shukrawal)

Key Projects

ShareMe - Social Media Web App (Self Project)

Objective	Developed a dynamic social media platform using React , Tailwind CSS , and Sanity.io , aimed at providing users with a seamless experience for sharing photos, engaging through comments, and fostering community.
Approach	<ul style="list-style-type: none">Implemented Google authentication for secure and convenient user login, ensuring authentication reliability.Utilized React and Tailwind CSS to create a responsive and visually appealing interface, optimized for all devices.Integrated Sanity.io for flexible content management, enabling seamless data handling for user-generated content.
Result	<ul style="list-style-type: none">Achieved robust security and authentication through Google authentication, optimized performance and scalability using modern technologies, providing a reliable platform capable of accommodating growth and user needs.Developed a commenting system that allows users to engage in discussions on shared photos, enhancing interaction.

Credit Card Fraud Detection (Self Project)

Objective	Develop a machine learning model to detect fraudulent credit card transactions from an imbalanced dataset.
Approach	<ul style="list-style-type: none">Implemented Logistic Regression, KNN, Random Forest, and Decision Tree algorithms for classification.Evaluated models with ROC and learning curves, comparing results based on F1 score and Confusion matrix.Utilized advanced kernel functions in Support Vector Machines (SVM) for the precise final classification step
Result	Achieved a 96% accuracy on the testing dataset, effectively detecting and mitigating fraudulent transactions.

Portfolio - Web App (Self Project)

- Developed responsive web app using Next.js (SSR) and **Three.js** for **3D graphics**, boosting engagement and performance.
- Enhanced UI with Acertinity UI animations, **Framer Motion** effects, and Bentogrid layout for improved user experience.
- Integrated **Sentry** for monitoring web stats and Core Web Vitals, enabling data-driven performance optimization.

Snake game using Reinforcement Learning (Self Project)

- Developed a reinforcement learning agent to autonomously play a Snake game, utilizing a **linear Q-network** for decision-making.
- Engineered the Snake game environment with **Pygame** and used Q-learning-based decision making for training the model.
- Engineered a comprehensive **state representation vector** capturing critical game features, including directional dangers, current direction, and relative position of the food, to provide the agent with a robust understanding of its environment.
- Utilized Matplotlib to visualize training progress, plotting scores and mean scores to track agent performance over time.
- Achieved a **maximum score of 72** in just **150 games** and **average score of 27** after **1000 training episodes**.

Technical Skills

- Programming Languages:** C++, C, Javascript, Python
 - Web:** HTML, Tailwind, JavaScript, React, NextJS, Sanity
- Libraries:** Numpy,Pygame, STL, Scikit-learn
 - Utilities:** \LaTeX , Jupyter, Git, GitHub

Relevant Courses

Introduction to Electronics	Fundamentals of Computing
Economy, Society & Public Policy	Ordinary Differential Equations
Partial Differential Equations	Linear Algebra
Single Variable Calculus	Energy Systems
Classical Electrodynamics	Dynamics
Machine Learning for Engineers	Engineering Graphics

Extra Curricular

- Achieved **1st position** for Badminton in Fresher’s Inferno - IITK’s inter Hall sports tournament organised for Freshers.