

Aryan Rana

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Education

Jaypee University of Information and Technology

2021 -2025

Bachelor of Technology in Computer Science (GPA: 7.7 / 10.00)

Solan, India

- **Relevant Coursework:** Data Structures and Algorithms (C++), Prob & Stat in CS (Python), Intro to CS II (C++), Linear Algebra w/Computational Applications (Python)

Technical Skills

Languages: JavaScript, python,C++,C ,HTML, CSS, Matlab,Sql, Pandas, Oracle

Technologies: React.js, Git/Github, Figma, OpenCV, Pandas, Seaborn, Adobe Photoshop, Bootstrap, Node.js

Coursework:Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Machine Learning, Operating Systems, Data Analysis and Visualization, Discrete Mathematics, Web Development

Database: MySQL, Oracle SQL

Projects

Machine Learning - Airbnb Price Prediction | Python, Librosa, Pandas, Sci-Kit

- Developed a machine learning model that predicts listing prices for over 1,000 properties based on 10+ features, improving pricing accuracy.
- Utilized regression techniques, including Linear Regression and Random Forest, achieving an R squared score of 0.85 and reducing prediction error by 20%.
- Implemented effective feature engineering and hyperparameter tuning, enhancing model performance and leading to actionable pricing strategies that increased potential revenue by 15%.

Voice Authentication System | Python, TensorFlow, Speech Recognition, BeautifulSoup, Matplotlib, Pandas,Scikit-learn

- Created a voice recognition system that authenticates users based on unique voice patterns, successfully processing voice samples from over 500 users.
- Implemented advanced machine learning algorithms for feature extraction and classification, achieving an authentication accuracy of 95% after extensive testing.
- Optimized model performance through hyperparameter tuning and validation, resulting in a 30% reduction in false acceptance rate (FAR) and false rejection rate (FRR).

Smart Voice Assistant | Python, SpeechRecognition , Pyaudio,API

- Modernised a virtual assistant in Python that executes tasks based on voice commands, successfully handling over 200 unique commands, including sending emails and fetching weather updates.
- Integrated robust audio input processing, achieving an 85% command recognition accuracy and enabling seamless user interaction.
- Enabled the assistant to launch applications on the device, enhancing user convenience and productivity by reducing task completion time by 30%.

Certifications

Machine Learning Specialization Certificate

- Supervised Learning: Mastered regression and classification techniques for real-world data.
- Unsupervised Learning: Learned clustering and recommendation systems to optimize models.
- Advanced Algorithms: Explored cutting-edge techniques to enhance model accuracy.

React JS Certification

- Studied React components, props, and state management for building reusable UI components.
- Explored advanced topics such as hooks, context API, and performance optimization techniques to enhance application efficiency.

Software Engineering and Agile software development

- Gained insight into the software development lifecycle (SDLC), covering requirements gathering, design, implementation, testing, deployment, and maintenance.
- Learned Agile methodologies like Scrum and Kanban, focusing on project management, task prioritization, and cross-functional team collaboration.