

# K Sushanth Raj Singh

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## EDUCATION

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**Thapar Insitute of Engineering and Technology**  
*B.E Computer Science and Engineering*

**August 2021 - June 2025**  
*Patiala, India*

**Sri Chaitanya School**  
*10+2 (PCM)*

**June 2021**  
*Hyderabad, India*

## EXPERIENCE

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**Live Project - Futures First**  
*Project Intern*

**September 2023 - December 2023**  
*Remote*

- Developed a pairs trading strategy using statistical arbitrage techniques, such as distance and cointegration, for pairs selection.
- Used methods like Copulas and Markov switching to identify trading opportunities and employed libraries such as Pandas, NumPy, Matplotlib, and Python for data processing and model building.

## PROJECTS

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### SafeHole

- Designed and implemented a comprehensive vehicle safety system using real-time video analysis for pothole detection.
- Utilized ESRGAN to enhance the resolution of video frames and deployed a YOLOv9 model for pothole detection which has an accuracy of 96%. Successfully deployed the entire pipeline in a live cloud environment, ensuring robust and scalable performance.

### NewsNet

- Developed a news retrieval application using Flutter to fetch and display real-time news from the internet via APIs
- Gained proficiency in Flutter application development and integrating RESTful APIs to create an interactive and user-friendly news experience.

## Course Work

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- Artificial Intelligence
- Database Management
- Operating System
- Options, Futures, and Derivatives

## TECHNICAL SKILLS

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**Languages:** C/ C++, Python, SQL.

**Technologies:** Machine Learning, Deep Learning.

**Frameworks and Libraries:** Tensorflow, Pandas, Numpy, Flutter.

## ACHIEVEMENTS

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- Achieved 4th position in Vertex Machine Learning Competition hosted by TIET.