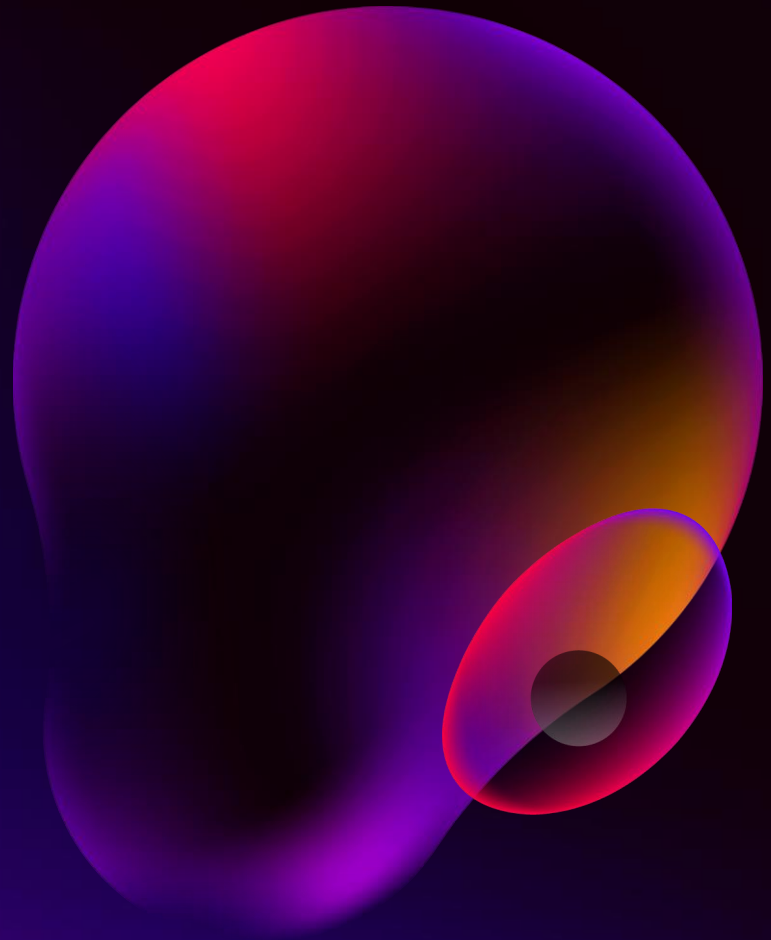
Stock Price Prediction

Applied Data Science

INNOVATION

Introduction

- Briefly introduce the importance of stock price prediction.
- Mention the challenges and complexities involved in predicting stock prices.



01

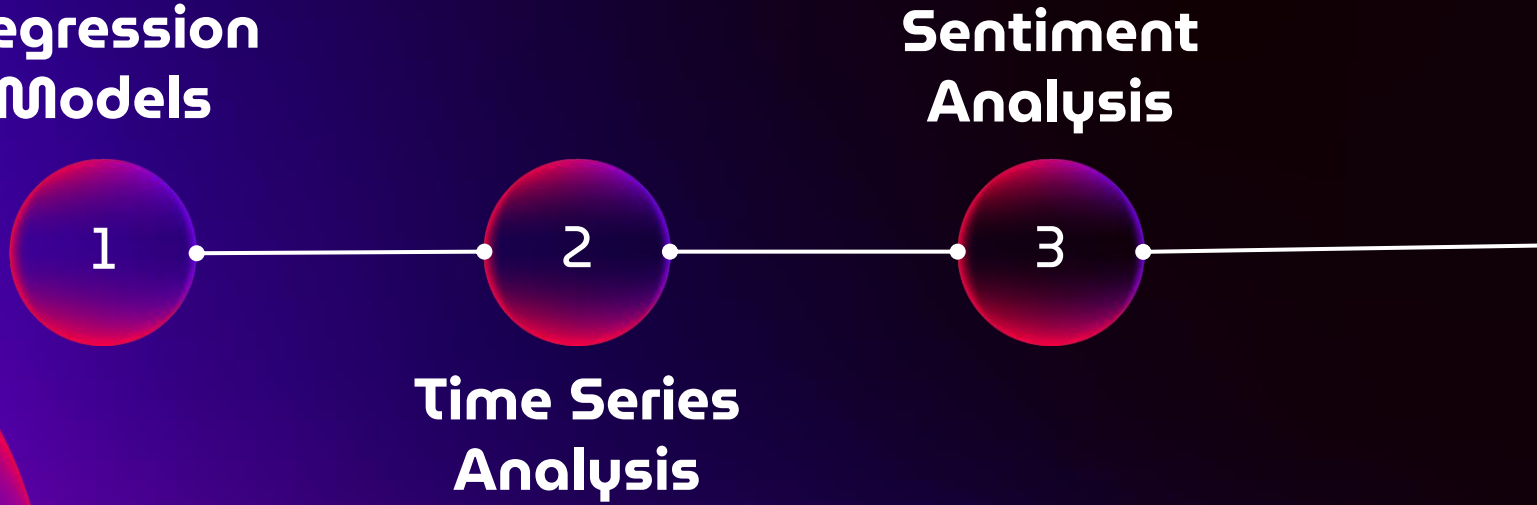
Traditional Approaches

For Stock Price Prediction

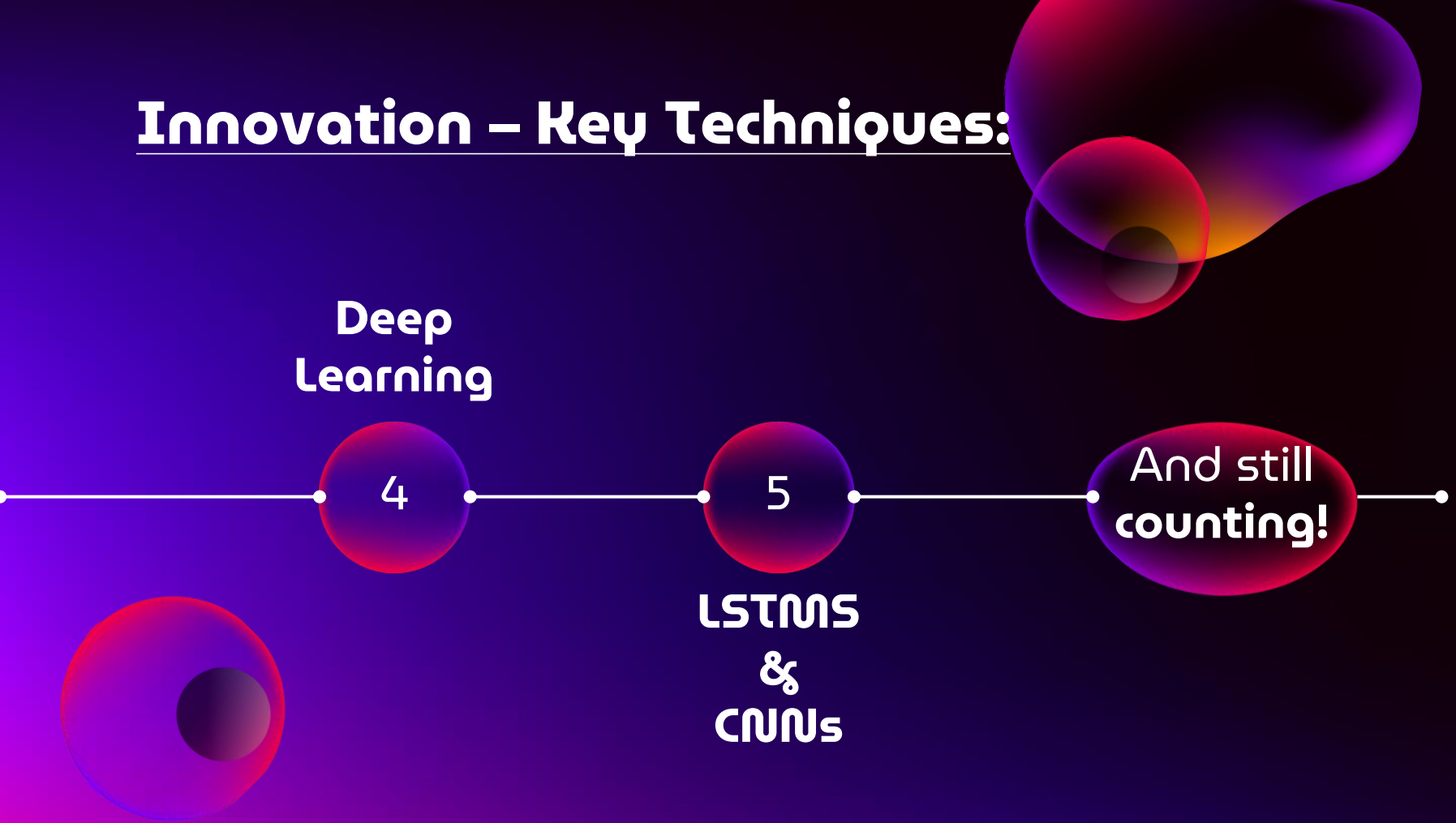
Traditional Approaches:

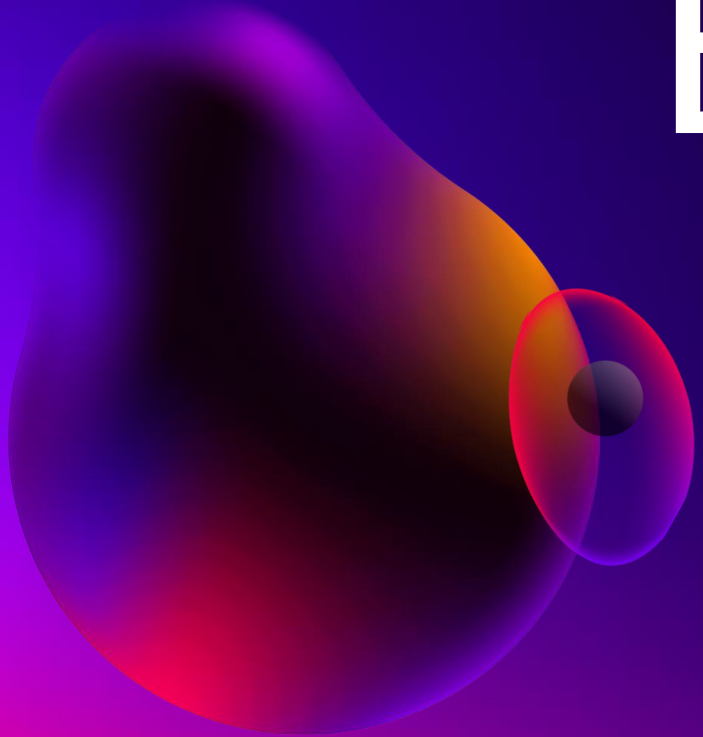
- Moving Averages
- Fundamental Analysis
- Technical Analysis
- Highlight limitations like low accuracy

Innovation – Key Techniques:



Innovation – Key Techniques:





Big Data & AI

- Use of large datasets for training models
- Real-time data processing for timely predictions
- Feature engineering and dimensionality reduction techniques
- Reinforcement learning for dynamic strategies

Future **Directions:**

- Quantum computing for complex modeling
- Advanced natural language processing for news sentiment analysis
- Integration of blockchain technology for transparency and data security

AI and Interpretability

- Emphasize the growing importance of explainable AI and model interpretability in stock price prediction.
- Discuss the challenges related to model black-box behavior and regulatory requirements for transparency.
- Introduce techniques like SHAP values and LIME to make AI models more interpretable and trustworthy.

Conclusion:

- Summarize the key takeaways.
- Emphasize the ever-evolving nature of stock price prediction in applied data science.