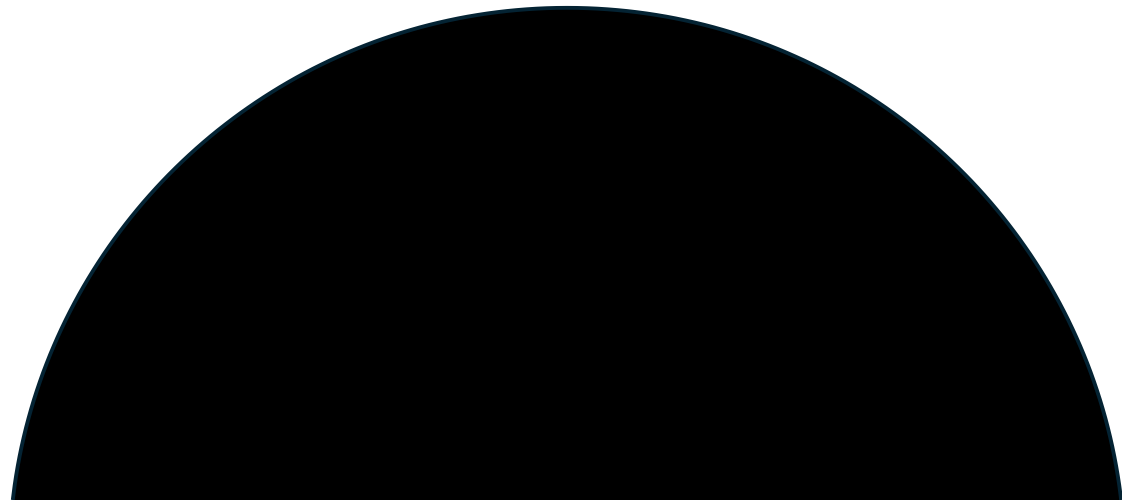Session #02

Polynomial Regression
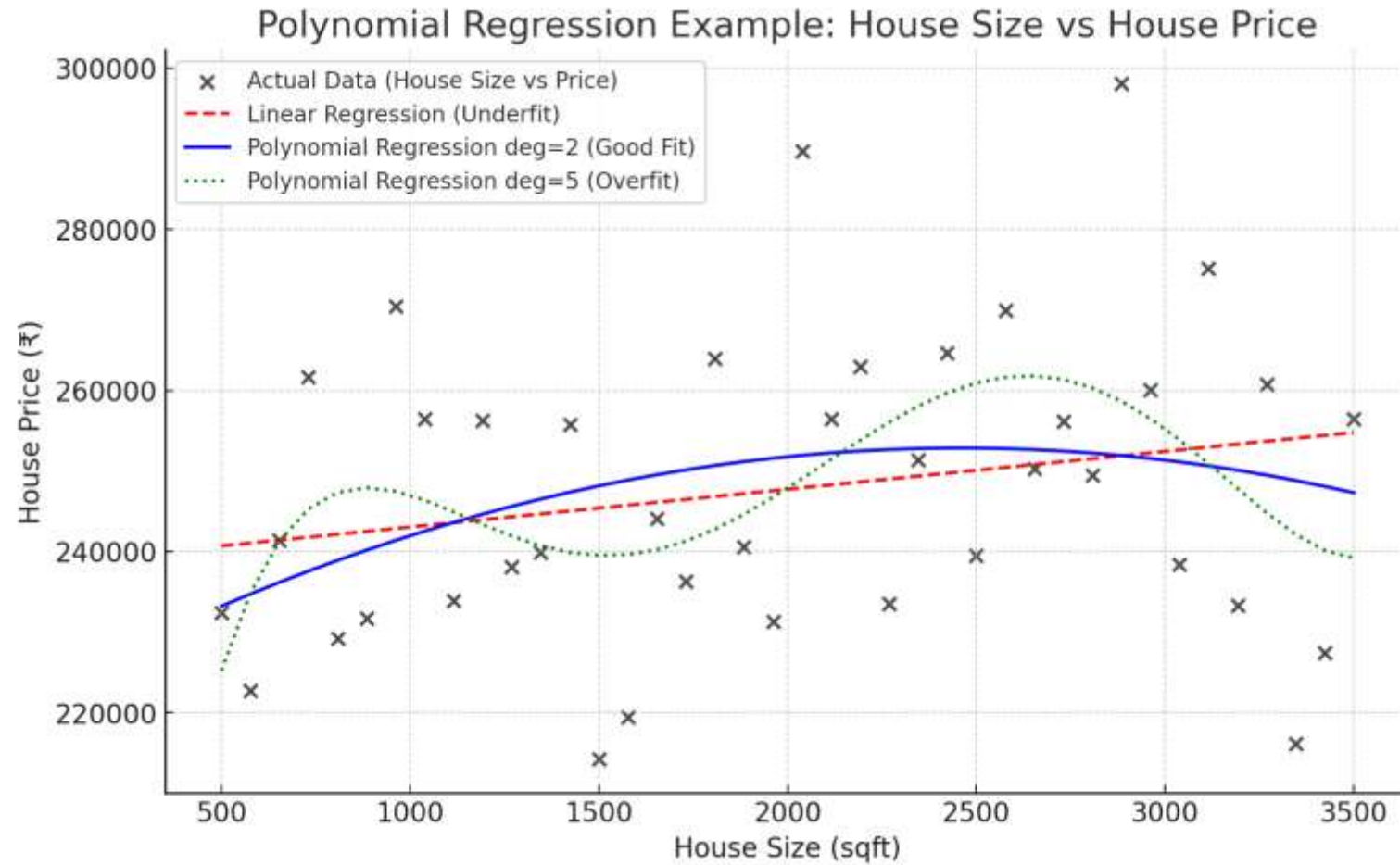
What is a Polynomial Regression Model?

- Linear regression fits a straight line

- Real-world data often follows curves, not straight lines

- Polynomial regression allows the model to bend by adding powers of features (x^2, x^3, ...)

Pitfalls & Solutions

- High-degree polynomials can overfit (too wiggly curves)

- Solution: keep degree small (2–3)

- Use cross-validation to pick the right degree

Datachains

House Size vs Price

Datachains

Key Takeaways

- Polynomial regression = linear regression with curved features

- Good for capturing curved relationships in data

- Beware of overfitting with high-degree polynomials