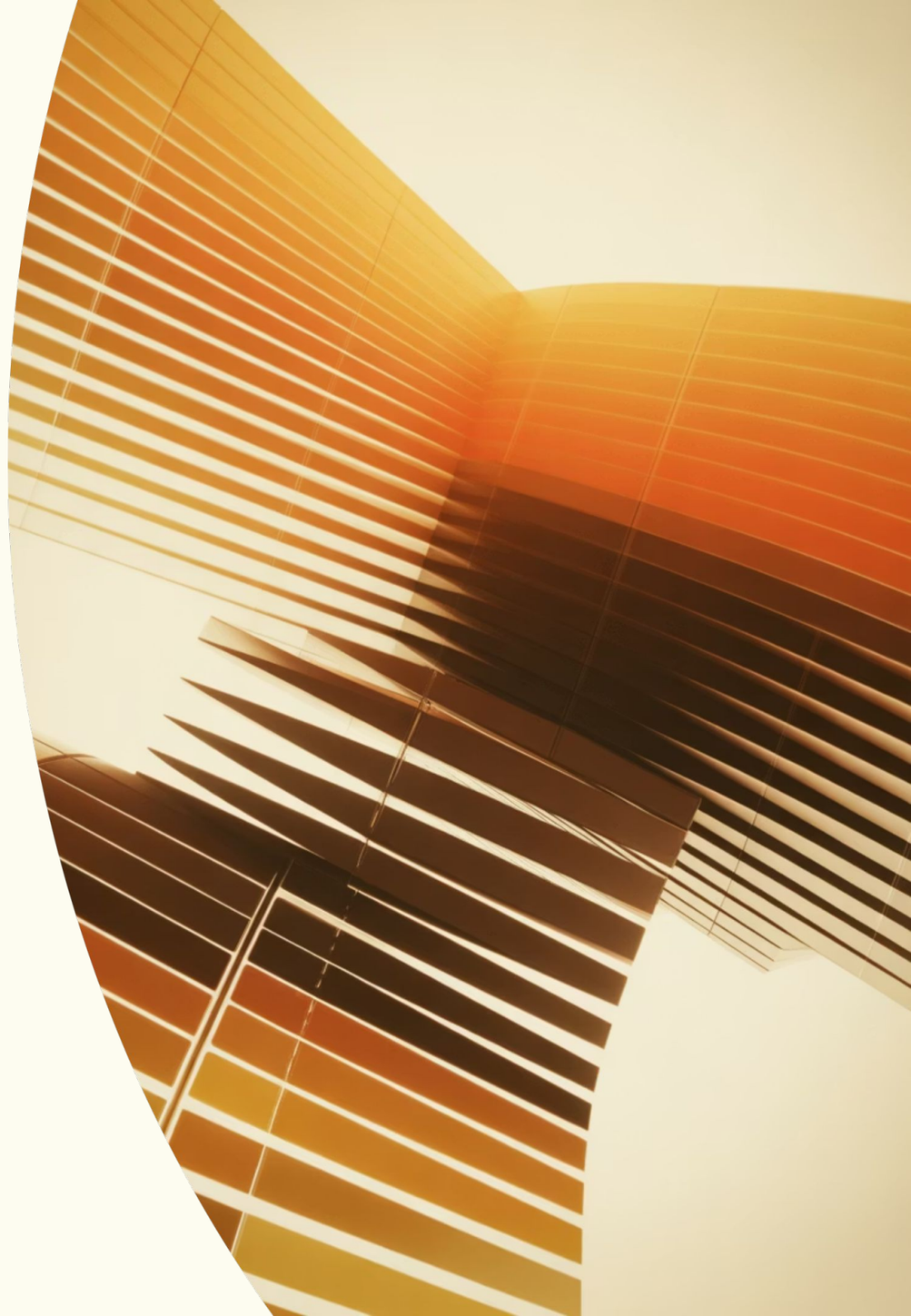
Linear Regression and Logistic Regression

Foundational machine learning techniques.



What This Module Covers

This module provides a comprehensive foundation in two essential machine learning techniques. We'll explore how regression models work, from their underlying mathematics to practical applications.

Regression Basics

Predict continuous outcomes. Fundamental to ML.

Cost & Gradient Descent

Measure error with cost functions. Optimize parameters using gradient descent.

Evaluation Metrics

Assess model performance. Use R-squared, MSE, and other metrics.

Key Assumptions

Understand statistical assumptions for model validity.

Logistic Regression

Transition from linear to logistic regression for classification tasks.

Sigmoid & Decisions

Explore the sigmoid function and its role in decision boundaries.

How We'll Approach It

We build your machine learning understanding progressively, combining theory, intuition, and practice. Complex concepts are broken down for clarity.

Simple Explanations

Clear, jargon-free concepts.

Visual Intuition

Diagrams for patterns.

Short Examples

Real-world applications.

Hands-On Practice

Coding exercises for application.

Let's Begin

Embark on an exciting journey into regression analysis. Linear regression is a foundational technique in machine learning and statistics.

We'll dive into linear regression, exploring the intuition of fitting data to a line. Discover how math, statistics, and computation create powerful predictive models.