

- ◆ Slide 1: Title Slide

> Good [morning/afternoon], everyone. We are pleased to present our final project titled “Economic Analysis and Decision-Making Tool for Software Projects.”
This tool is designed to help software engineering teams make better economic decisions throughout the software development life cycle.

- ◆ Slide 2: Project Overview

> Our goal was to develop an interactive application that integrates economic models directly into the software development process.
The tool helps users estimate costs, manage budgets, assess risks, and optimize resource allocation.

- ◆ Slide 3: Technologies Used

> For the technical side, we built a full-stack web application.
The frontend was developed using React.js, the backend using Flask, with a PostgreSQL database, and visualizations were created using Chart.js.

- ◆ Slide 4: Cost Estimation Module

> The first module estimates project costs using multiple methods:
Empirical models like COCOMO and Function Points, heuristic techniques like Expert Judgment and Delphi, and analytical methods using regression.
This gives users multiple perspectives to compare and analyze estimates.

- ◆ Slide 5: Budgeting and Cost Management

> Next, we integrated financial tools such as ROI, Net Present Value, Internal Rate of Return, and Payback Period.
Users can also track budgets across phases and compare actual costs versus estimates.

- ◆ Slide 6: Risk Management Module

> Our risk management module includes tools like sensitivity analysis, decision trees, and Monte Carlo simulations.
These allow users to model uncertainty and visualize the financial impact of risks.

- ◆ Slide 7: Resource Allocation & Optimization

> For resource planning, we implemented leveling and smoothing algorithms.
Users can simulate different staffing or scheduling scenarios and understand how costs and timelines are impacted.

- ◆ Slide 8: GUI and Demonstration

> The GUI is designed to be intuitive.
Users input data, select models, and immediately see visual feedback—charts, summaries, and risk graphs.

DEMO

- ◆ Slide 10: Conclusion

> In conclusion, this project allowed us to apply economic theory in a real software engineering context.

We gained experience in both full-stack development and decision-making based on financial and risk analysis.

Thank you for your attention—