Economic Analysis and Decision-Making Tools for Software Projects

An Economic Analisys and Decesion-Making Tool for a Saftware Project

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Architecture and Technologies

- React - frontend interface
- Python Flask - backend logic
- PostgreSQL - store data
- Chart.js - graphs and visualizations

Cost estimation module

This module allows user to estimate project cost by entering key information
It using three estimation models:

- COCOMO
- Function Points
- Expert Judgment

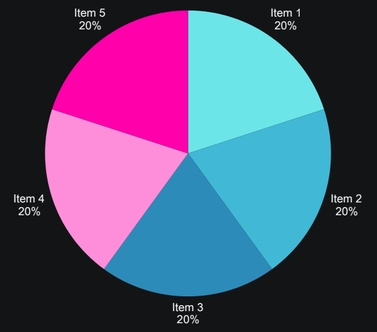
- Shows the result side by side
- Lets users adjust inputs
- Allows exporting pdf

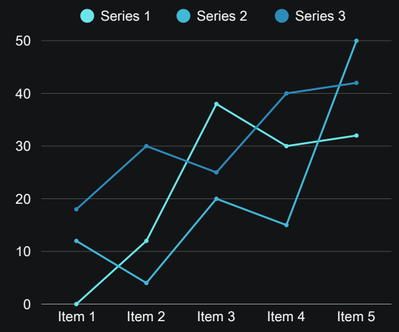
Budgeting and Cost Management

In this module users can calculate key financial indicators:
ROI, NPV IRR and Payback Period

The tools also includes:
- Budget tracking
- Alerts for cost overruns

For TaskBuddy:
- ROI: 40%
- NPV ≈ 4,900$
- IRR ≈ 18%
- Payback Period: 7 month





Risk Management Module

This module helps users identify and evaluate project risks using three analysis methods

Provides clear visual outputs to better understanding of risks

1. Sensitivity Analysis
2. Decision Trees
3. Monte Carlo Simulation

Ressource Allocation and Optimization

This module let users simulate different team configuration

For example:

- 3 developers in 4 months

vs

- 2 developers in 6 months

Results and Outcomes

- Predict cost more accurately
- Plan better
- See financial risks
- Make smater decisions

It connect economic theory with real development choices

Thank You