

Capstone Project Proposal

Project Title

Smart Mission Request & Approval System for Companies

Problem / Purpose

This project aims to create a Smart Mission Request & Approval System: a single web/mobile platform where employees can quickly submit mission details, upload supporting documents, and track approvals in real time. Managers will have an at-a-glance dashboard for pending requests, budget status, and urgent approvals, while finance teams will get instant expense reports and mission history for better forecasting and cost control.

Objectives & Success Criteria

- Digitize the Mission Request Process – Replace paper forms and email-based requests with an easy-to-use web/mobile interface.
- Enable Real-Time Tracking – Allow employees to instantly see the status of their mission requests (Pending, Approved, or Rejected).
- Streamline Manager Approvals – Provide managers with a dashboard for quick review, approval/rejection, and budget allocation.
- Improve Budget Visibility – Give finance teams tools to monitor departmental mission spending and control costs.
- Centralize Mission Records – Store all mission requests, approvals, expenses, and reports in a single searchable database.
- Automate Reporting & Analytics – Generate detailed insights such as most frequent destinations, top expenses, and approval timeline.

Key Innovations & Technological Enhancements

AI-Powered Budget Estimation & Policy Guardrails

An intelligent system in the mission request form that assists employees in creating accurate, policy-compliant budgets before submission. It auto-fetches average lodging, meals, and transport costs from external databases and flags any entry exceeding company policy.

Automated Digital Mission Briefing Packet

A comprehensive auto-generated PDF instantly delivered upon approval containing mission summary, approved budget, travel policy, itinerary, emergency contacts, and booking links.

Predictive Analytics for Finance Dashboard

A dashboard that forecasts mission spending, identifies savings opportunities, and provides trend analysis for smarter budgeting and cost control.

Mission Impact & ROI Tracking

A mandatory post-mission step where employees report outcomes (e.g., client acquisition, project delivery). Links mission cost with ROI to measure value and justify expenditures.

Milestones & Timeline

Week 1 – Requirements & Design: Gather requirements, define approval workflows, and finalize UI/UX design.

- Week 2 – Core Development: Develop mission submission, approval workflow, and basic dashboard.
- Week 3 – Additional Features & Integration: Add budget tracking, expense submission, reporting, and notifications.
- Week 4 – Testing & Deployment: Conduct testing, fix errors, and deploy the system.

Feasibility & Risks

Feasibility: The project can be built using React, and Node.js / nestjs with PostgreSQL/MySQL. It aligns with existing company processes and can be deployed within one month.

Risks: Time constraints (scope creep), user adoption resistance, data accuracy issues, technical bugs, and security risks related to sensitive data handling.