Project Proposal: Trackify – AI-Powered Task Management System

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1. Executive Summary

Traditional task management tools operate as passive systems that rely heavily on manual updates and offer limited intelligence. Teams often spend significant time maintaining tasks, reacting to issues, and managing workloads due to a lack of predictive insights and workflow optimization.

Trackify addresses these challenges by integrating AI-driven automation with a cloud-native AWS microservices architecture. The system provides:

- Predictive task suggestions
- Automated planning
- Risk anticipation
- Optimized workflows

The application is deployed on AWS EC2, with load balancing and auto-scaling to ensure high availability and performance. IAM roles secure access, credentials are stored in AWS Secrets Manager, and VPC peering enables secure network connectivity. Task data is managed using MongoDB Atlas, providing scalable and reliable storage.

By combining AI intelligence with cloud infrastructure, Trackify empowers teams to plan efficiently, anticipate project risks, and streamline task management for enhanced productivity.

2. Introduction

Efficient project management is critical for team productivity, but traditional tools often lack intelligence and automation. Teams face challenges such as:

- Manual task updates
- Poor workflow optimization
- Limited ability to anticipate risks

Trackify leverages artificial intelligence and AWS cloud services to overcome these limitations. By providing automated task planning, predictive insights, and secure cloud deployment, Trackify demonstrates a modern approach to project management, enhancing team efficiency and decision-making.

3. Problem Statement

Existing task management systems present several issues:

- Depend heavily on manual updates, causing inefficiencies
- Lack predictive insights for proactive planning
- Do not optimize workflows, leading to wasted time and resources

There is a clear need for a smart, cloud-based task management system that can automate planning, predict potential risks, and improve overall team productivity.

4. Aim & Objectives

Aim:
To develop an AI-driven, cloud-native task management system that automates workflows, predicts risks, and enhances team productivity.

Objectives:

1. Develop an AI engine to provide predictive task suggestions and risk anticipation.

2. Deploy a scalable application on AWS using EC2 instances with load balancing and auto-scaling.

3. Secure the system using IAM roles and manage credentials with AWS Secrets Manager.

4. Implement VPC peering for secure network connectivity.

5. Store and manage task data efficiently using MongoDB Atlas.

6. Provide a responsive, user-friendly frontend for task visualization and management.