

Feasibility Study Report

Project Title: FARM: Faculty Activity Reporting and Management System

Date: 22/05/2025

Introduction

Before proceeding with the development of a large-scale system, it is essential to assess its feasibility across multiple dimensions. This feasibility study evaluates whether the proposed system can be successfully developed and deployed, considering the available resources, technical competencies, cost constraints, and compliance with legal and ethical standards.

Technical Feasibility

The project is **technically feasible** based on the following justifications:

1. Skill Availability:

The development team possesses working knowledge and experience in:

- MERN Stack (MongoDB, Express.js, React.js, Node.js)
- Database design and cloud integration
- Machine Learning (ML), Natural Language Processing (NLP), and Language Models (LLMs)

2. Tool Support:

A wide range of modern tools and platforms are available to support:

- Document parsing and data extraction
- Hosting and deployment
- Dynamic document generation using LLMs

Operational Feasibility

The system is **highly feasible operationally**, with significant benefits for all stakeholders:

- **Primary Users:** Faculty members and faculty coordinators
- **Operational Benefits:**
 - Streamlined workflows with reduced manual communication (e.g., emails)
 - User-friendly form-based data submissions

- Automated report generation for internal and external reviews (NAAC, AU, AICTE, UGC)

This automation reduces administrative burden and improves accuracy and accessibility of faculty-related data.

Economic Feasibility

The project is **economically feasible**, requiring minimal to no cost for core infrastructure:

- **Hosting Options:**
 - Render, Railway, Vercel, GitHub Pages (for frontend)
 - Firebase or MongoDB Atlas (Free Tier) for backend/database
- **Additional Tools:**
 - Supabase (free tier), Google Colab (for ML workflows)
- **Domain Name:** Optional – not required for internal or academic usage

Conclusion: The system can be developed with negligible financial investment, leveraging free-tier tools and services effectively.

Legal and Ethical Feasibility

The system is **legally and ethically feasible**, provided the following considerations are addressed:

- **Key Questions:**
 - Will sensitive faculty data be handled securely and ethically?
 - Are there institutional policies on storing and processing faculty-related information?
- **Findings and Recommendations:**
Feasible with minor safeguards:
 - Implement role-based authentication and access control mechanisms
 - Avoid storing personally identifiable information (PII) such as salaries, unless explicitly approved by the institution

Conclusion

The project is **feasible across all dimensions**:

- **Technical Feasibility:** Strong tech stack and tool support
- **Operational Feasibility:** Clear use cases and stakeholder benefits

- **Economic Feasibility:** Minimal to zero cost using available free-tier tools
- **Legal and Ethical Feasibility:** Manageable with authentication and privacy protocols