ANNEXURE - A

**HMR INSTITUTE OF TECHNOLOGY & MANAGEMENT**

**Hamidpur, Delhi-110036**

**(An ISO 9001: 2008 certified, AICTE approved & GGSIP University affiliated institute)**

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**Department of Computer Science and Engineering**

**Synopsis of Major Project**

**Date: 26 Febraury 2024**

**Minor Project Title**: " **Microlearning Recommendation System** "

**Name of Supervisor(s):**

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| **Program**: - **B.Tech(CSE/IT)** | | **Year/Semester: - 8th Semester** | |
| **S. No.** | **Enrolment No.** | **Name** | **Signature** |
| 1 | 00913307221 | Roshani Kumari |  |
| 2 | 00813307221 | Prashant Sharma |  |
| 3 | 01113307221 | Deepak Bisht |  |
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**Major Project Summary:**

Our minor project aims to develop a user-centric **microlearning recommendation system** leveraging web technologies and data science techniques. This platform will cater to diverse learners across various academic disciplines, recommending personalized microlearning resources to maximize learning efficiency and engagement.

**Objectives:**

1. **Personalized Recommendations:** Build a system that recommends microlearning resources tailored to individual user profiles, interests, and learning styles across diverse academic fields.
2. **Data-Driven Approach:** Leverage data sources like Open Educational Resources (OERs), MOOC platforms, and user interactions to inform recommendations and improve system accuracy.
3. **Intuitive User Interface:** Design a user-friendly interface that allows users to easily discover relevant resources, track progress, and provide feedback.
4. **Continuous Improvement:** Continuously refine the system based on user feedback and data analysis, ensuring optimal performance and personalized learning experiences.
5. **Research Paper:**

* **Topic:** "Personalized Microlearning for Enhanced Learning Outcomes"
* **Focus:** Investigate the impact of personalized microlearning recommendations on student engagement, knowledge retention, and overall learning effectiveness.
* **Methodology:** Conduct user studies and analyze user data to assess the system's impact on learning outcomes and user satisfaction

**Base Paper Link:**

[research paper link]

**Resource Requirement:**

* **Development Team:** Frontend and backend developers, data scientists, and UI/UX designers.
* **Hardware/Software:** Servers for hosting and cloud infrastructure for scalability.
* **Development Tools:** Web development frameworks, data analysis libraries, and cloud computing platforms.
* **Data Sources:** Collaborations with OER platforms, MOOCs, and educational institutions.
* **User Feedback:** User testing and surveys to gather feedback and refine the system.

**Schedule of Major Project Work Along with Research Paper:**

**February:**

* Define project scope, research methodology, and select technologies.
* Build the core platform infrastructure and user authentication system.
* Start data acquisition and preprocessing from chosen sources (OERs, MOOCs, etc.).

**March:**

* Implement recommendation algorithms (collaborative filtering, content-based, or hybrid).
* Design and develop the user interface for resource browsing and recommendations.
* Conduct initial unit testing and bug fixing.

**April:**

* Integrate data visualization tools for user feedback and monitoring.
* Conduct user testing with a small group from diverse disciplines.
* Refine recommendation algorithms and user interface based on feedback.

**May:**

* Deploy the system on a chosen platform (web app, mobile app) and develop marketing strategies.
* Monitor system performance, user engagement, and recommendation accuracy.
* Finalize and publish research paper, and prepare final project presentation.

By following this schedule and meeting our objectives**, we aim to leverage web technologies and data science techniques, this project has the potential to make a significant impact on the learning landscape.**

**Signature of Student Signature of Supervisor(s)**

**Signature of Major Project Co-ordinator:**

**Co-ordinator Name:**

**Approval by Project Committee**

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| **Member** | **Signature** | **Remark (Approved/Not Approved)** |
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| **Member** | **Signature** | **Remark (Approved/Not Approved)** |
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