Problem Statement

Avalanche' 24 Hackathon

Track: Alpha

Domain : AI/ML

PS Code: 01

Project Title: **Intelligent Task Prioritization System**

Project Description

Revolutionize task management with our AI-driven scheduler.

- Intuitive Input: Easily add tasks and set priorities.
- Smart Scheduling: Learn from your habits to optimize task timing.
- Real-time Tracking: Visualize progress and stay on top of deadlines.
- Continuous Learning: Adapts to your changing needs for peak efficiency.

Team Name: Dev Yodha

Team Leader Name: Yogesh Balgi

Institute Name: KLS Gogte Institute of Technology

Idea/Approach Details

- **User-friendly Task Input**: Enables quick task creation and priority setting with an intuitive interface.
- **Habit-Based Scheduling**: Leverages reinforcement learning (DQN) to optimize task timing based on user habits.
- **Dynamic Task Management**: Continuously adjusts schedules to minimize conflicts and enhance productivity.
- **Real-Time Monitoring**: Provides dashboards and alerts to track progress and meet deadlines effectively.
- **Adaptive Learning System**: Evolves with user feedback to align with changing priorities and goals.
- **Data-Driven Optimization**: Ensures smarter task management through insights from continuous usage.

Approach Details

Technology stack

- **Frontend Technologies:** HTML, CSS, JavaScript
- **Backend Technologies:** Python (Django)
- **Database Technologies:** SQLite.
- **Machine Learning Technologies:** TensorFlow, PyTorch.
- **Data Visualization Technologies:** Matplotlib, Plotly.
- **DevOps & Hosting:** Heroku.

Idea/Approach Details

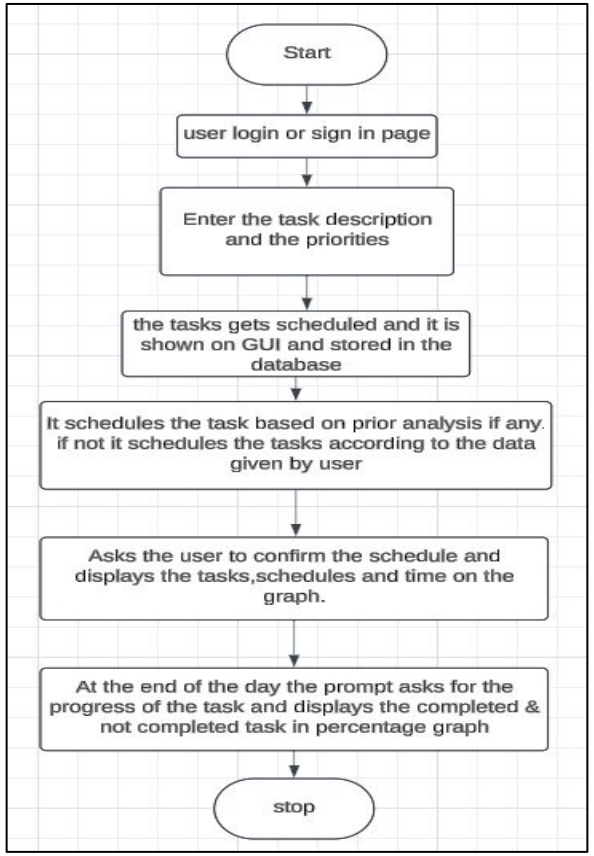

Fig 1: Flowchart

Idea/Approach Details

Use Cases

- **Student:**
  - Prioritize assignments, projects, and study time based on deadlines and importance.
  - Optimize study schedules to maximize learning efficiency.
- **Professional:**
  - Manage a diverse workload of tasks, meetings, and emails.
  - Prioritize tasks based on urgency, importance, and dependencies.
  - Optimize work schedules to improve productivity.
- **Freelancer:**
  - Balance multiple projects and deadlines.
  - Prioritize tasks to maximize income and client satisfaction

Dependencies And Show stopper

Dependencies

- **Data:** Historical task data is key; limited or inaccurate data impacts predictions.
- **Resources:** Needs databases, ML frameworks, and hosting.
- **Engagement:** User input and feedback improve accuracy.
- **Integration:** APIs and tools ensure seamless connectivity

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Showstoppers

- **Data Challenges:** Insufficient historical data
- **System Downtime:** Hosting interruptions halt
- **Adoption & Trust:** Engagement and privacy
- **Algorithm Limitations:** Overfitting and generalization

Team Member Details

Team Leader Name: YOGESH BALGI

Branch :BE Stream: CSE Year :III

Team Member 1 Name: SUYOG KAREKAR

Branch :BE Stream: CSE Year :III

Team Member 2 Name: NEHA MAHULE

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Team Member 3 Name: SAHIL ARATE

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