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AI for Bharat Hackathon

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Team Name : DormDispatch (Individual Submission)

Team Leader Name : Arkaprabha Chakraborty

Problem Statement : AI-powered platform selection, regional optimization, and scheduling for student creators.

Brief about the Idea:

DormDispatch is an AI-driven decision-support system designed for student creators.
It helps users:

- Choose suitable platforms for their content
- Optimize content for specific audiences and regions
- Plan realistic posting schedules aligned with academic constraints

The solution focuses on **distribution intelligence**, not content generation — enabling consistent and informed growth alongside academics.

About DormDispatch:

How is it different?

- Built **for students**, not influencers
- Accounts for **academic constraints**
- Focuses on **distribution decisions**, not content creation

How does it solve the problem?

- AI-driven platform matching
- Regional & audience-aware optimization
- Academic-aware scheduling

USP

- Student-first AI for intelligent content distribution.

List of features offered by the solution:

AI-Based Platform Discovery
Matches content type and creator goals with suitable platforms.

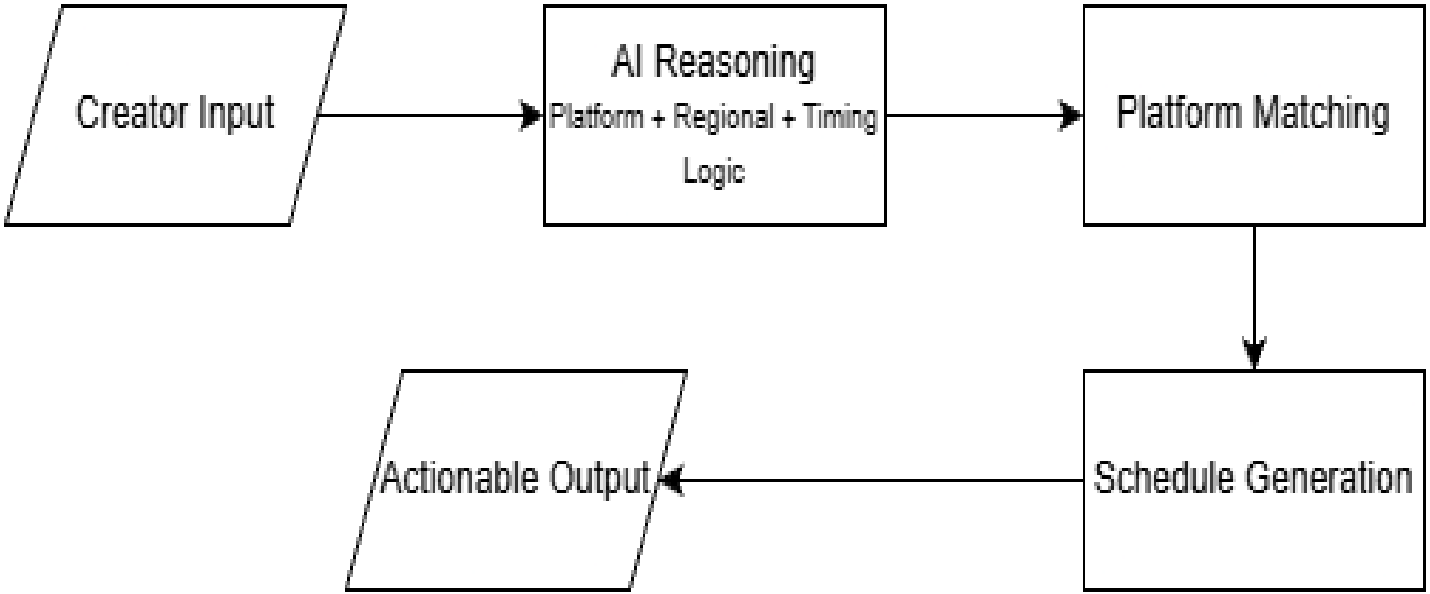
Explainable AI Recommendations
Provides structured outputs with reasoning — not black-box suggestions.

Regional & Audience Optimization
Suggests platform-specific adjustments based on audience and location.

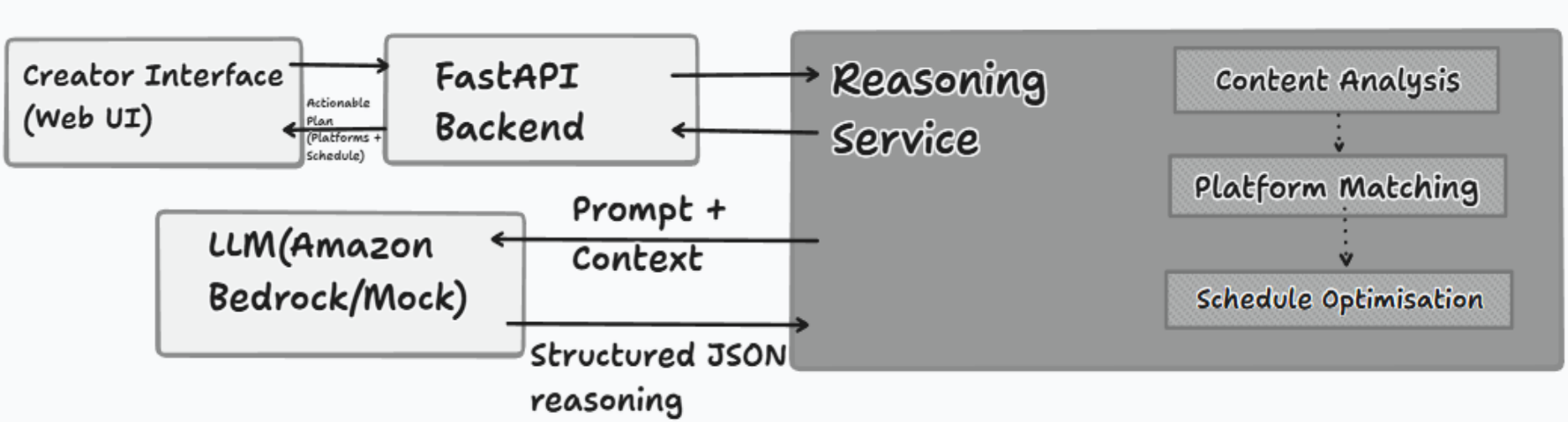
Scalable Backend Architecture
FastAPI-based system designed for seamless Amazon Bedrock integration.

Academic-Aware Scheduling
Generates realistic posting plans aligned with exams and workload.

Process flow diagram



Architecture diagram of the proposed solution:



DormDispatch transforms a creator's idea into a platform-aware posting plan by combining content understanding, platform matching, and time-aware scheduling through structured AI reasoning.

Technologies to be used in the solution:

AI & Intelligence Layer

- Amazon Bedrock *(designed inference layer)*
- Structured Prompt Engineering
- JSON-Schema Guided Reasoning
- Mock Bedrock (prototype fallback)

Interface & Testing

- Swagger UI (interactive testing)
- Simple Web UI (creator input form)

Backend

- Python
- FastAPI
- REST API architecture
- Async processing

Cloud & Dev Tools

- AWS (Bedrock-ready architecture)
- GitHub (version control)
- Kiro (requirements & design generation)

Architecture is cloud-deployable without modification once Bedrock access is enabled.

Estimated implementation cost (optional):

🧪 Prototype (Hackathon)

Cost: FREE

Local execution
Mock Bedrock inference
No hosting required
Built for validation & testing

Working prototype without cloud dependency

☁ Production Deployment

Cost: ~$20–40 / month

Amazon Bedrock inference
Serverless backend
Minimal storage usage
Scales with users

Affordable for student communities & colleges

Low-cost because system performs reasoning only when creator submits content — no continuous AI usage

Additional Details (As per Hackathon Requirements):

🧠 Meaningful Use of AI
- AI used for decision reasoning, not content generation
- Evaluates multiple interacting factors (content, time, audience, region)
- Produces explainable structured recommendations

🧪 Functional Prototype
- Working FastAPI backend/analyze endpoint operational
- Structured JSON response generated
- Swagger UI testable locally

☁️ AWS Alignment
- Designed for Amazon Bedrock inference
- Prompt + response schema compatible with Bedrock
- Mock inference used only due to account activation constraints
- Can switch to live Bedrock without architecture change

👩‍🎓 Relevance to AI for Bharat
- Built for students balancing academics and creativity
- Supports regional creators and small communities
- Encourages sustainable side-hustles

DormDispatch demonstrates a deployable AI system focused on practical impact rather than experimental modeling.

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Thank You