



add all these and create a proper documentation

Here is the updated **Project Kaleidoscope Documentation** with all essential features integrated for perfect market fit:

Project Kaleidoscope Documentation

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1. Introduction

Project Kaleidoscope is an innovation platform designed for the Cypher 3.0 hackathon (Track 6, KD's Garage Hybrid Innovation). Its core focus is preventing idea stagnation and promoting truly diverse creative thinking in teams, leveraging AI, NLP, and interactive humanoid guidance.

2. Vision & Differentiators

Kaleidoscope is the **first platform to combine:**

- *Humanoid cognitive guidance* (interactive reframing, challenge, and prompting)
- *Quantitative diversity metrics using NLP embeddings* (real-time scoring)
- *Integration of structured creativity techniques* (Random Word Association, Reverse Brainstorming, Lotus Blossom)
- *Active cognitive bias checking* (bias heatmaps and nudges)

3. Core Features

3.1 Idea Diversity Meter with NLP Embeddings

- **Tracks idea fluency, flexibility, originality, and elaboration**
- Uses advanced NLP models to score ideas for diversity
- *Provides real-time visual feedback and historical trend timelines*

3.2 Cognitive Bias Checker

- **Automatically detects and visualizes cognitive biases**
- Dynamic prompts interrupt bias loops and encourage new perspectives
- Bias heatmaps and session analytics for teams

3.3 Humanoid Interactive Creativity Partner

- **Live facilitator for reframing, role assignment, industry inspiration, and gamified challenges**
- Guides sessions with role rotation (challenger, amplifier, skeptic)
- Injects prompts to switch techniques, broaden context, and invite quieter voices

3.4 Integration of Structured Creativity Techniques

- **One-click access to Random Word Association, Reverse Brainstorming, and Lotus Blossom**
- Built-in templates, instructions, and session trackers
- Facilitates switching and hybridizing creativity methods as needed

4. Advanced Enhancements (for long-term roadmap)

- **Dynamic Diversity Challenges:** Periodic system-driven prompts for cognitive role-play
- **Cross-Industry Inspiration Feed:** Real-time injection of concepts from unrelated domains
- **Sentiment & Engagement Analyzer:** Detects engagement drops and reactivates quieter team members
- **Automated Action Plan and SWOT Generator:** Synthesizes outcome and accountability matrices
- **Privacy & Inclusion Safeguards:** Optional anonymization and equitable feedback systems
- **Mind Map Export & Integration:** Syncs with Miro, Figma, Notion, and other tools

5. Technical Implementation Summary

- **Backend:** Python 3.7+, Flask API ("Humanoid System API"), sentence-transformers
- **Endpoints:** /submit_idea, /generate_idea_variations (structured techniques, diversity scoring), /team/submit, /team/all, /health
- **Collaboration:** Flask-SocketIO for real-time team dashboards; SQLite for session and history logging

6. Workflow Example

1. User submits an idea via `/submit_idea`; receives NLP diversity score.
2. Humanoid partner recommends technique or role switch, possibly detects bias and prompts a challenge.
3. Team selects creativity method; platform generates structured variations, reframed questions, or mind maps.
4. Diversity Meter, bias heatmaps, and sentiment analysis inform next steps.
5. Action plan generator compiles the best ideas, assigns follow-up, and provides export options.

7. Use Cases

- *Innovation workshops seeking measurable diversity*
- *Product development craving fresh perspectives*
- *Hackathon teams overcoming creative stagnation*
- *Remote organizations optimizing bias-free collaboration*

8. Market Gap Fit

Kaleidoscope uniquely fills these gaps:

- **Measurable, enforced diversity** (not passive analytics)
- **Active bias correction**
- **Hybrid human-AI facilitation**
- **Structured technique integration**
- **Seamless collaboration and export**

9. Getting Started

See `requirements.txt`, run `humanoid_api.py` for full features. Use built-in endpoints to walk through ideation, explore diversity scoring, and cycle through advanced creativity methods.

For deeper details, session templates, or UX/workflow designs, just request more—Kaleidoscope is now documented with market-leading innovations ready for hackathon or enterprise deployment!