Project Report

Al Color Analyzer - Project Report

Overview:

Al Color Analyzer is a web-based application that leverages artificial intelligence to extract and analyze dominant colors from an uploaded image. The tool assists designers, developers, and creatives in identifying and using consistent color palettes for UI/UX or digital art.

Technologies Used:

Frontend:

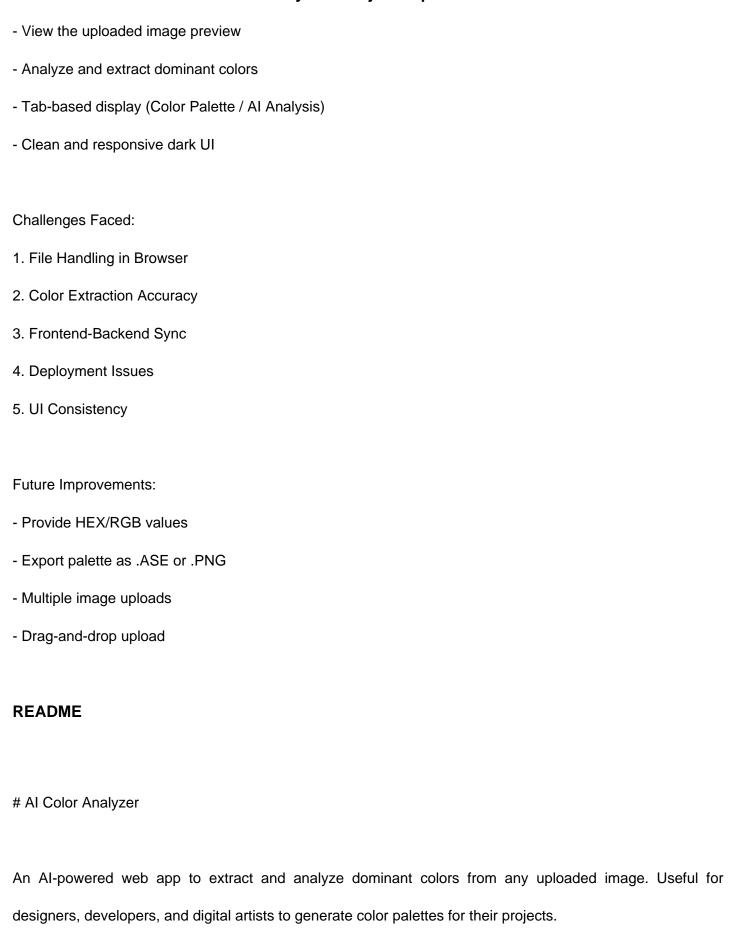
- HTML/CSS/JavaScript
- React.js
- Tailwind CSS
- Vite

Backend/AI:

- Flask / FastAPI (likely)
- Python
- Pillow / OpenCV
- K-means Clustering (Scikit-learn)
- Live Deployment on live.co.dev

Features:

- Upload an image via UI



Live Demo:
https://mvoiobbu8lltoq5z.live.co.dev
Features:
- Upload image via UI
- Preview uploaded image
- Analyze dominant colors
- View results in a responsive dark UI
Built With:
Frontend:
- React.js
- Tailwind CSS
- Vite
Backend:
- Python
- Flask / FastAPI
- Pillow / OpenCV
- Scikit-learn (K-means clustering)
Installation:
1. Clone the repository
2. Install dependencies: npm install
3. Run dev server: npm run dev

How It Works:

1. Upload an image via UI.

2. Image sent to backend.
3. K-means clustering extracts dominant colors.
4. Palette shown in UI.
Challenges Faced:
- Accurate color detection
- UI alignment
- File handling
- Deployment setup
Future Scope:
- HEX/RGB output
- Export options
- Drag/drop upload
- Multi-image analysis
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