

StackScope is a real-time analytics and AI insight platform designed to monitor developer activity across repositories, visualize productivity trends, and summarize performance using intelligent metrics. This documentation provides a complete overview of the platform, technologies used, and instructions to get started.

## Project Overview

StackScope helps developers track commits, pull requests, issue activity, and generate AI-based summaries of productivity trends and code tone insights over time.

## Tech Stack

- React (Vite) + TypeScript
- Tailwind CSS for modern UI styling
- Recharts for data visualizations
- GitHub REST API for real-time data
- OpenAI GPT-3.5 Turbo for sentiment and summary generation

## Getting Started

1. Clone the repository
2. Install dependencies: `npm install`
3. Set GitHub and OpenAI keys in `localStorage` or `.env`
4. Run frontend: `npm run dev`
5. Run backend: `node server.js`

## Integrations

- **GitHub API:** Authentication and repository data
- **OpenAI API:** Sentiment scoring and AI summaries
- **Slack (Coming Soon):** Share AI summaries with team

## Key Features

- Realtime GitHub activity tracking
- Productivity and sentiment score graphs
- AI-generated summaries for each year
- Reviewer suggestion and review intelligence
- Clean, responsive UI for dashboards

## Component Structure

- `/components/Dashboard` – Main dashboard cards
- `/components/AIInsight` – GPT-powered features
- `/components/GitHub` – GitHub analytics and charts
- `/pages` – Routes like Realtime, Summary, and Docs

## Roadmap

- Slack sharing functionality
- Team-based productivity insights
- Dark mode support
- Expanded GitHub integration (multiple repos)

## 👤 Developer Credits

StackScope is built by **Harshal Patel**, a full-stack developer focused on intelligent tooling, clean interfaces, and AI-enhanced developer analytics.