

AI for Bharat Hackathon

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Team Name : Quantum Crew

Team Leader Name : Jayashree.B.R

Problem Statement :

AI for Learning & Developer Productivity: *Build an AI-powered solution that helps people learn faster, work smarter, or become more productive while building or understanding technology.*

Brief about the Idea:

Project Title:

VisionDev AI – Context-Aware Visual AI Assistant for Developers

Idea Description:

VisionDev AI is an AI-powered visual assistant that helps developers learn faster and debug smarter by understanding their coding environment in real time. Unlike traditional AI coding assistants that only read code, VisionDev AI uses computer vision to analyze the developer's screen, detect errors, understand program behavior, and provide intelligent suggestions automatically.

The system can detect runtime errors, explain code, suggest fixes, and respond to voice commands such as “Fix line 12” or “Explain this error.” This creates a proactive, interactive, and intelligent learning and development environment.



How different is it from any of the other existing ideas?

Problems with Existing AI IDEs:

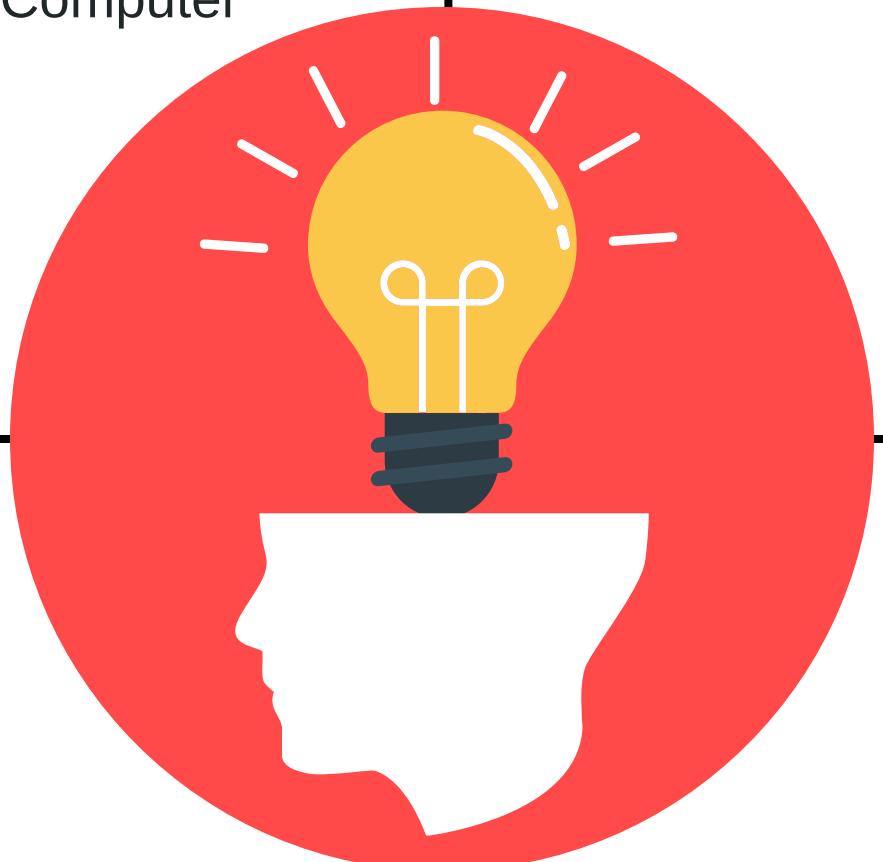
- Cannot see runtime errors unless pasted manually
- Cannot analyze terminal or browser errors automatically
- Cannot visually detect UI issues
- Requires manual prompts
- Limited real-time awareness

Our Solution:

VisionDev AI introduces Visual Awareness using Computer Vision.

How will it be able to solve the problem?

- Detects errors automatically from screen
- Suggests fixes instantly
- Reduces debugging time
- Improves learning speed and productivity



Screen-aware AI assistant using OpenCV

Automatic error detection without copy-paste

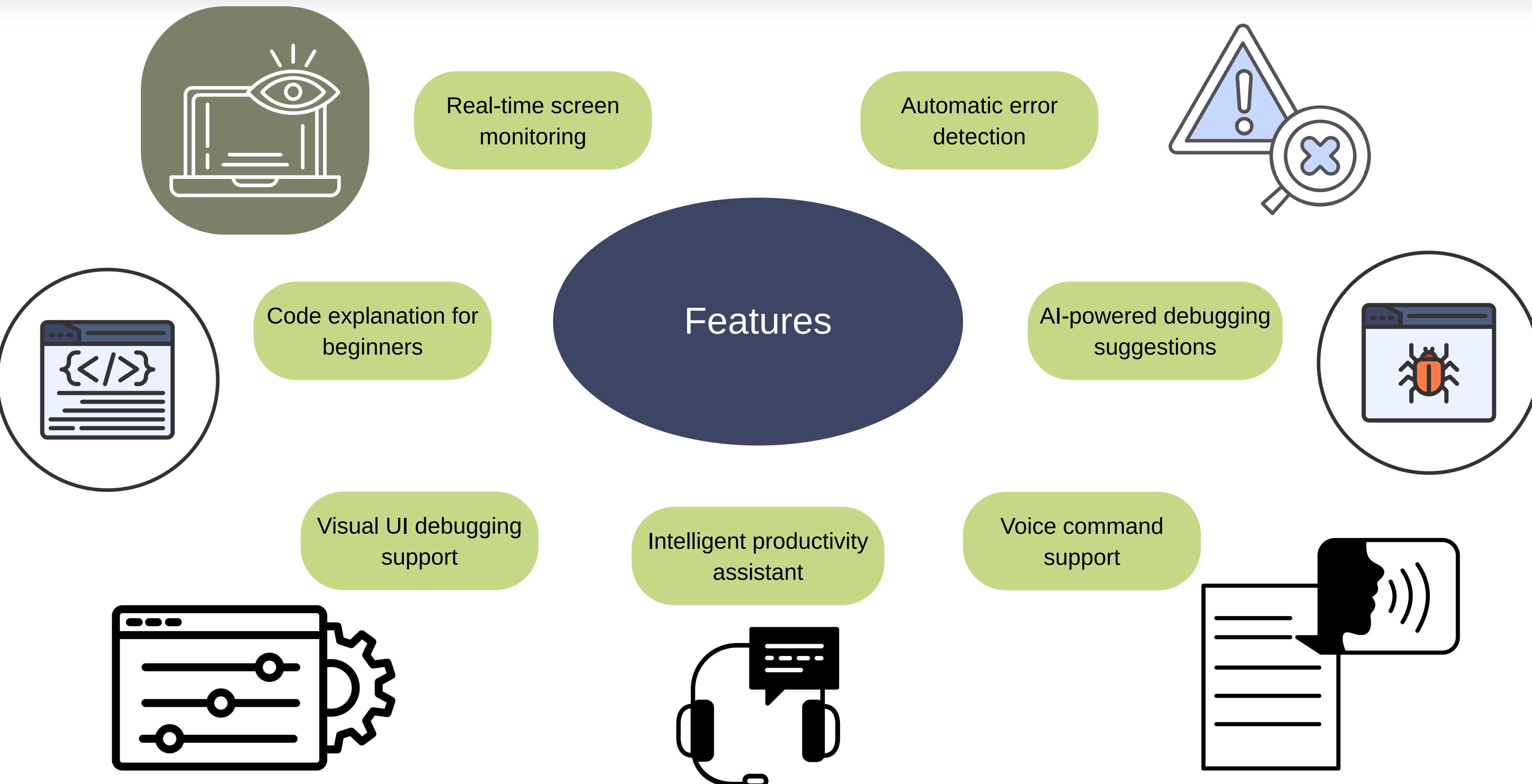
Voice-controlled debugging

USP of the proposed solution

Real-time AI assistance

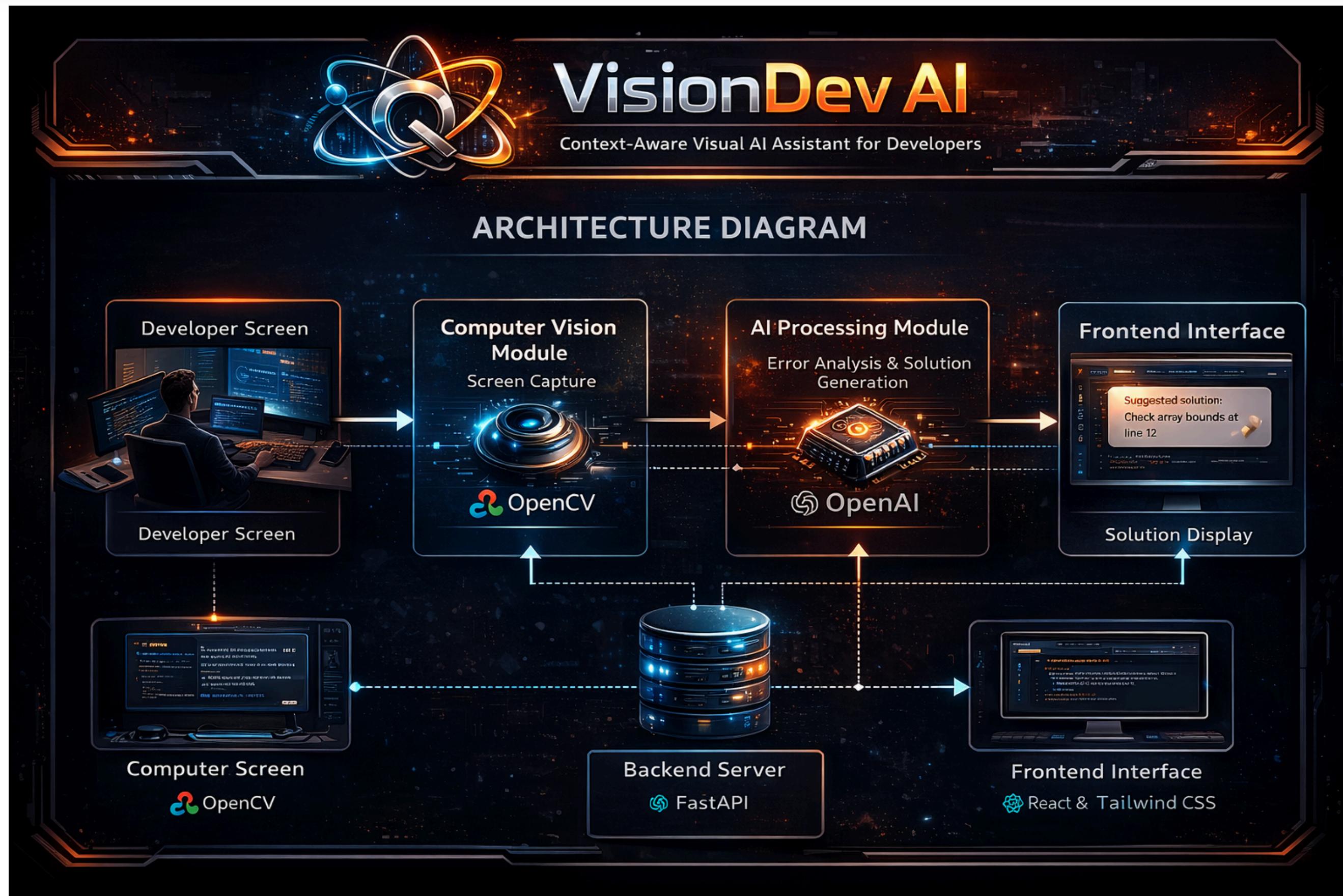
Beginner-friendly explanations

Full coding environment awareness

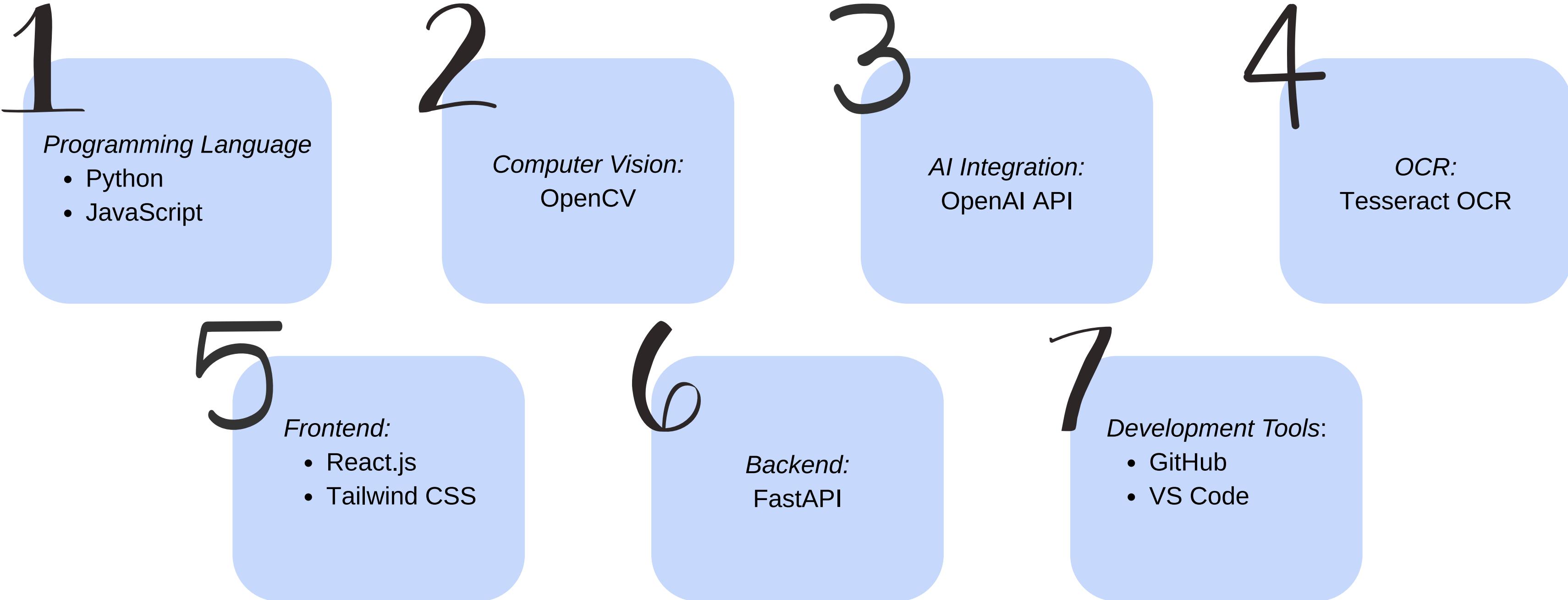




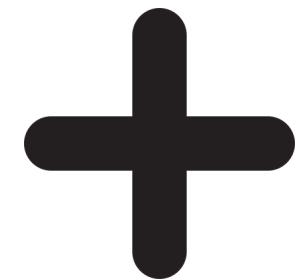




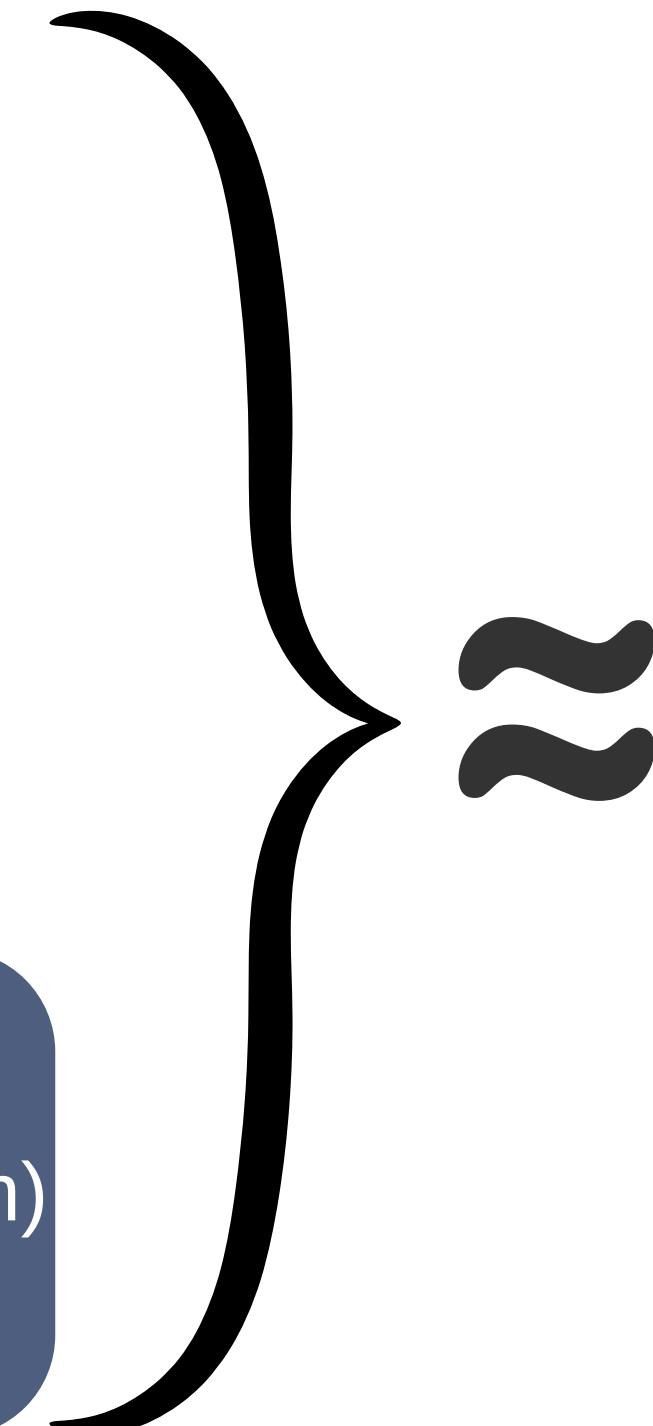
TECH STACK



Development Cost:
Free (using open-source tools)



Infrastructure Cost:
Basic: ₹0–₹500/month (local system)
Cloud (optional): ₹1000/month



Total Cost:
Minimal and scalable

VisionDev AI satisfies hackathon goals:

Helps
developers
learn faster



Improves
productivity



Uses AI
meaningfully



Provides real-
world impact



Innovative use
of Computer
Vision



Beginner-
friendly solution



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Thank You

