



ARTIFICIAL INTELLIGENCE DEBUGGING ASSISTANT

GOOGLE GIRL HACKATHON 2025

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BTECH, IIIT LUCKNOW



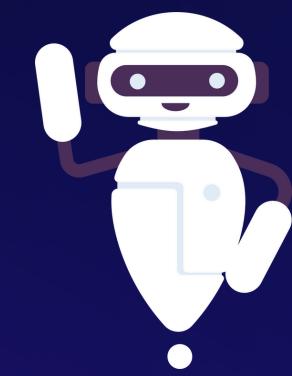
PROBLEM AT HAND

- Debugging is a frustrating bottleneck in software development, slowing down productivity and delaying project completion.
- Traditional debugging methods require manual effort—searching through error logs, reading documentation, and seeking help from online communities.
- This process is time-consuming, inefficient, and disrupts workflow, often leading to frustration.
- With the rise of complex software systems, developers need a faster, smarter way to debug and resolve issues.

THE NEED FOR AN AI-POWERED SOLUTION

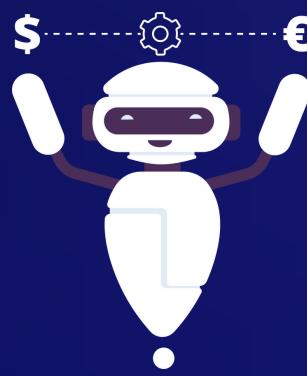
- AI-driven debugging can simplify this process by providing error analysis, explanations, and intelligent fixes in real-time.
- By automating error detection and suggesting solutions, developers can focus on building, rather than troubleshooting.

OUR AI DEBUGGING ASSISTANT



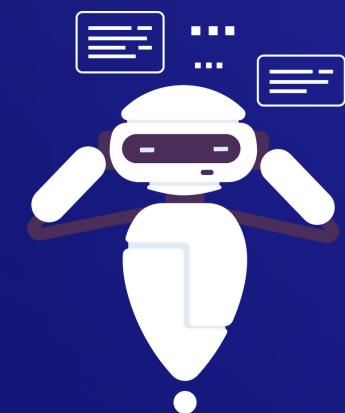
FEATURE 01

AI-based Error Detection –
Identifies syntax, logical, and
runtime errors using machine
learning for precise debugging.



FEATURE 02

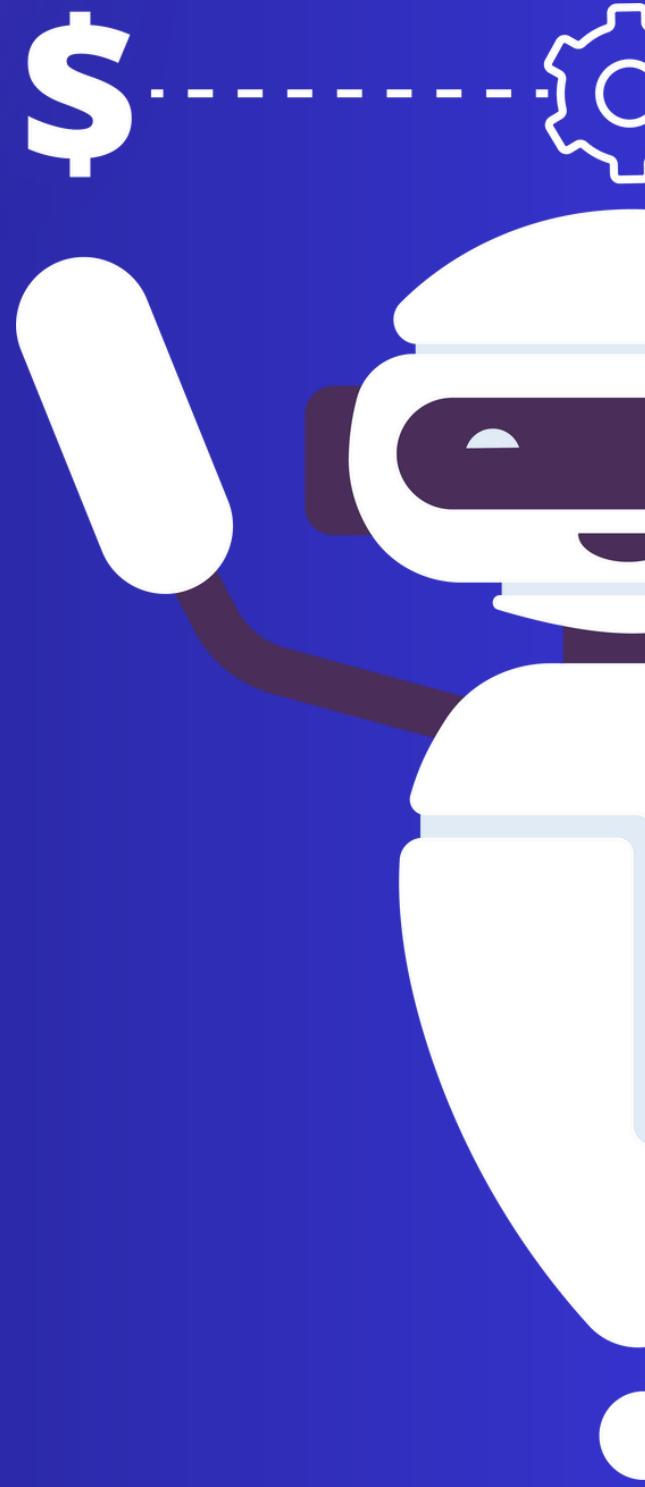
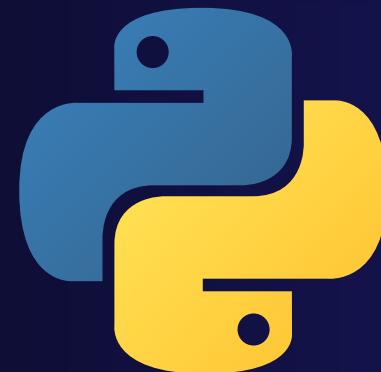
Code Suggestions & Fixes –
Provides AI-driven corrections
with optimized, context-aware
solutions for efficient
debugging.



FEATURE 03

Works for Python, C++, Java –
Supports multiple
programming languages with
AI-driven debugging
assistance, with a scalable
design for future language
expansion.

TECH BEHIND THE SOLUTION



SEAMLESS DEBUGGING PROCESS



User Inputs Code –
The user submits their
code through the
interface for analysis.

Backend (Flask API) –
A Flask-based API
processes the request
and forwards the code to
the AI model.

AI Model (Hugging
Face/OpenAI) –
The AI model analyzes the
code, detects errors, and
generates debugging
suggestions.

Debugging Suggestions –
The system returns AI-
generated explanations,
fixes, and
recommendations to help
the user resolve issues
efficiently

VISION FOR FUTURE

(01)

- VS Code plugin integration

Integrating our AI Debugging Assistant into VS Code will allow developers to receive real-time error analysis, suggestions, and fixes within their coding environment.

(02)

- Advanced AI model fine-tuning

By continuously refining our AI models with diverse datasets and real-world debugging scenarios, we will enhance accuracy, efficiency, and contextual understanding.

THANK YOU!

CLICK HERE:

[vennelavarshini18/AI-Debugging-Assistant](#)



AI-powered debugging tool that identifies and fixes code errors automatically.

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Contributor

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Issues

0

Stars

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Forks



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AI-powered debugging tool that identifies and fixes code errors automatically. - vennelavarshini18/AI-Debugging-Assistant

[GitHub](#)