

# FixMate AI

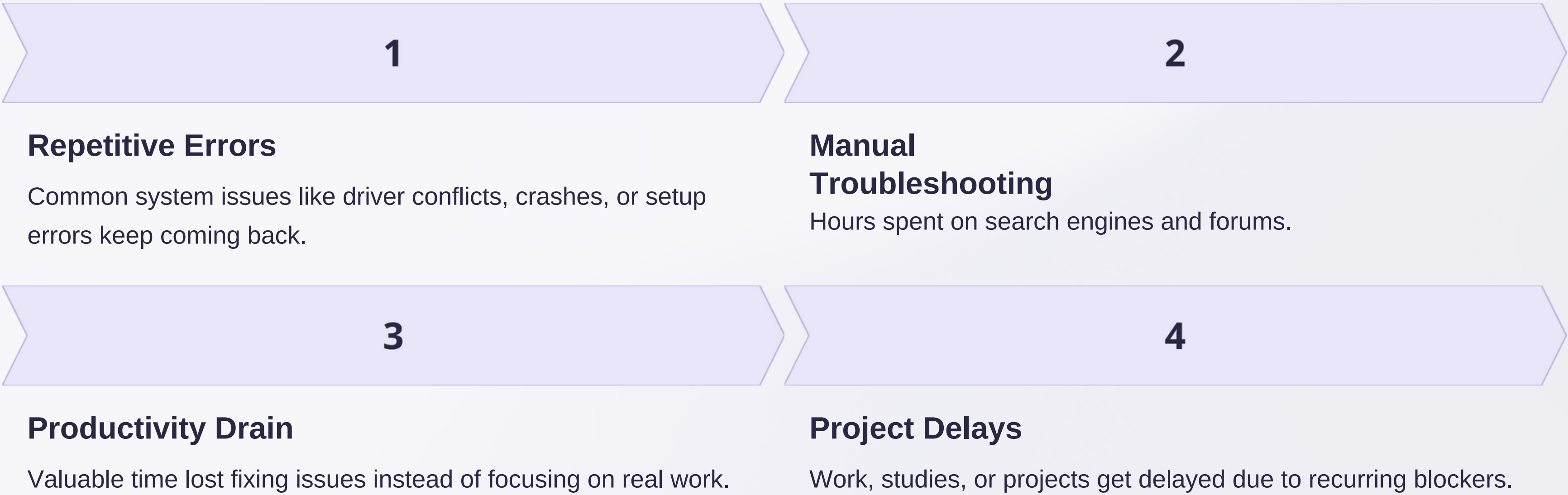
Your Smart Troubleshooting Companion

**TeamName - Bugbusters**

**Team Number - SSH-065**

# The Debugging Dilemma

Users often struggle with repetitive system issues such as high CPU usage, low disk space, driver conflicts, and network failures. These everyday blockers force people into manual troubleshooting and trial-and-error fixes, wasting time, lowering productivity, and disrupting their digital experience. The frustration is universal.



# Introducing FixMate AI: Smarter, Instant Fixes for Everyone

FixMate AI is built to **dramatically cut troubleshooting time** by automatically detecting common system and software errors, then instantly suggesting or safely applying fixes. With every successful resolution, it expands its knowledge base, becoming smarter and more efficient. **Issues that once took hours to solve can now be resolved in just minutes.**



## Error Detection

Automatically detects system problems (drivers, performance, ML environments, networks).



## Intelligent Suggestion

Provides precise, tested solutions tailored to the detected issue.



## Automated Application

Safely applies fixes across platforms with user approval.



## Knowledge Expansion

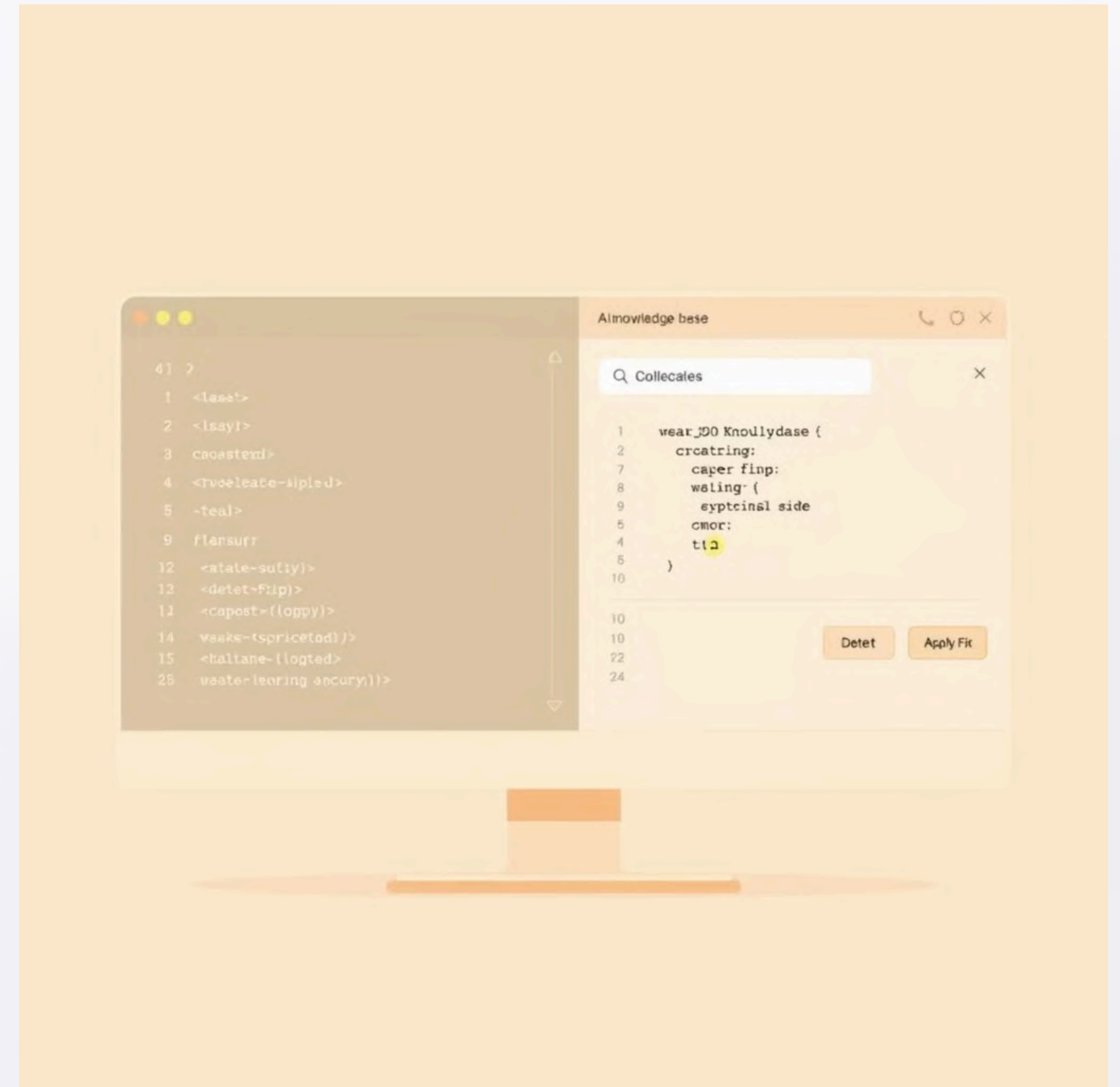
Continuously learns from every successful fix, becoming smarter and faster.



# What FixMate AI Can Do Today

FixMate AI is built on a robust foundation, featuring:

- **Smart Knowledge Base (JSON-powered):** A structured library of fixes for system, driver, and ML issues.
- **AI Error Matcher:** Uses Hugging Face Transformers to understand and map error messages to the right solution.
- **Process Controller:** Detects and safely terminates stuck or resource-heavy processes.
- **Command Executor:** Runs vetted fixes automatically in the background with user approval.
- **User-Friendly GUI (Flask):** Clean interface to search, apply, and track fixes.
- **Self-Learning Engine:** Expands its knowledge base after every successful resolution.



# Planned Roadmap & Enhancements

Our roadmap includes expanding FixMate AI's capabilities to integrate more deeply into the developer workflow and offer even more intelligent assistance.



## External Lookup

Real-time suggestions from StackOverflow and GitHub.



## Live Shell Integration

Seamless interaction directly within your command line.



## Plugin System

Support for frameworks like PyTorch and TensorFlow.

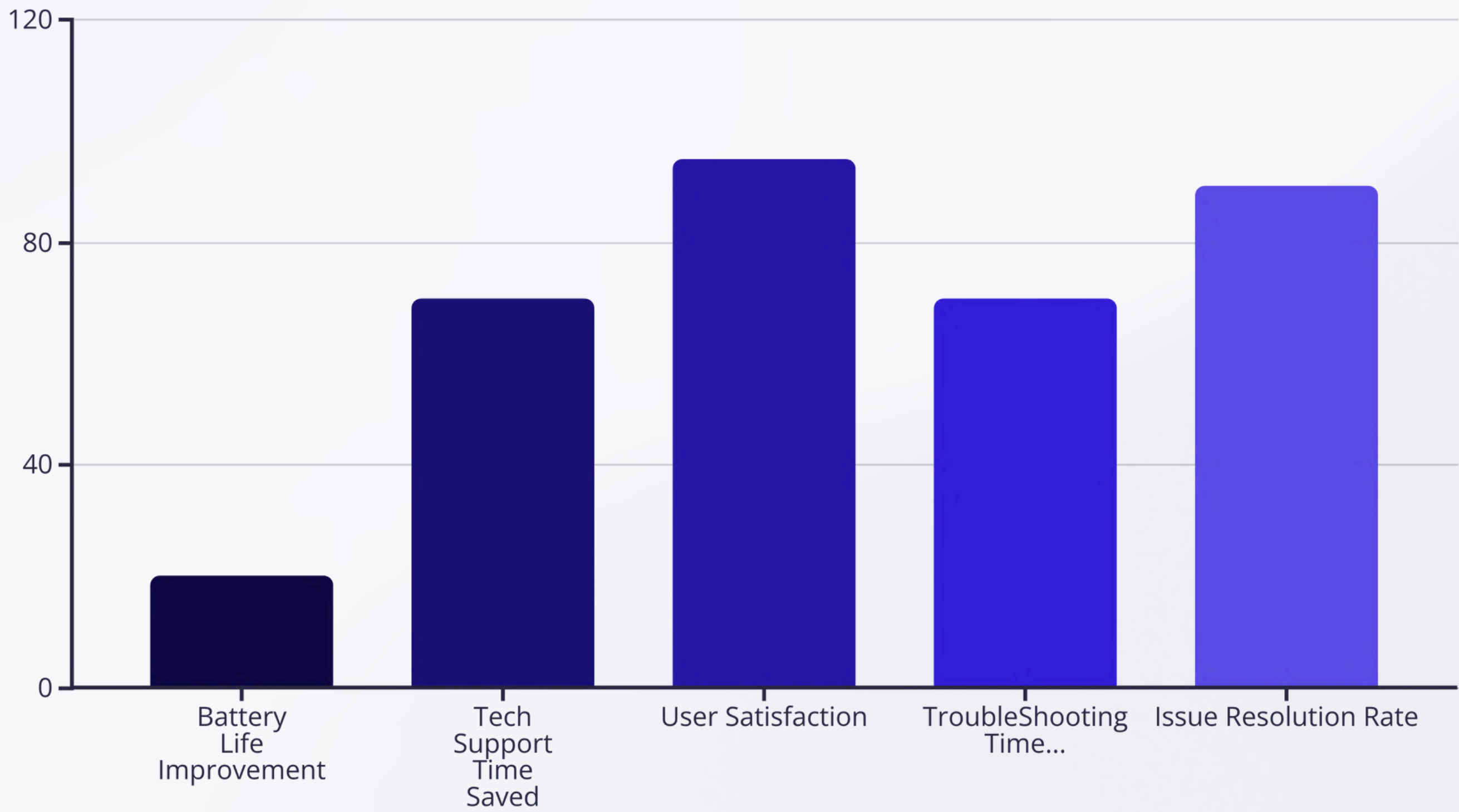


## Advanced Add-ons

LLM explanations, fix verification, and history tracking.

# Tangible Impact: Time Savings

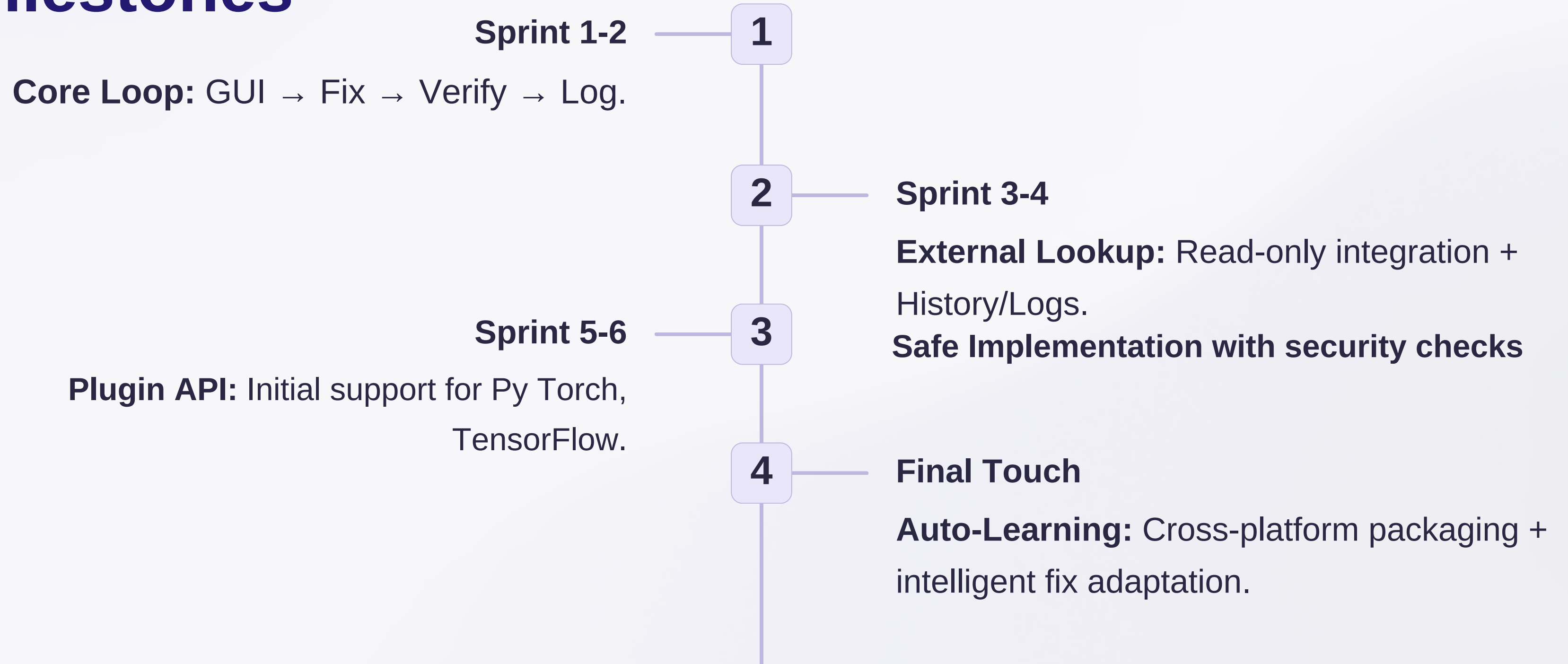
FixMate AI dramatically cuts down troubleshooting time, freeing developers to focus on innovation rather than debugging.



# High-Level Architecture



# Roadmap & Milestones



Our agile approach ensures rapid development and continuous delivery of valuable features.



# Safety & Trust: Our Core Principles

FixMate AI prioritizes user safety and system integrity through robust security measures.

## Dry-Run Mode

Simulate fixes without making changes, providing full transparency.

## Explicit Consent

All changes require explicit user approval before execution.

## Command Allow-List

Pre-approved commands per operating system prevent malicious activity.

## Secure Plugins

Checksums and signed updates ensure plugin authenticity.

## Redacted Logs

Privacy-focused logging to protect sensitive information.

# FixMate AI: Project Team Members

Our dedicated team behind this project

- Divyesh
- Vamsi
- Supreet
- Srinivas

