AI-POWERED DEVELOPERS BEST FRIEND

NEXT GENERATION DEVELOPMENT ASSISTANT

10.25.2024

MEET THE TEAM

Arun Mishra

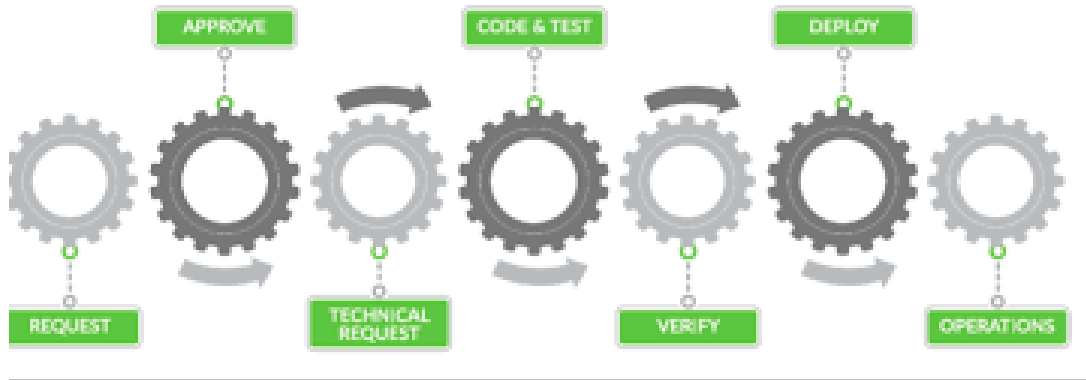Umang Singh

Pradnya Adwankar

Ankith Jain

PROBLEM STATEMENT

Engineering teams often struggle to deliver high-quality code quickly while managing dependencies, following best practices, and adopting new technologies. These **productivity roadblocks** not only affect development but also increase the **Total Cost of Ownership**. To overcome this, organizations must measure productivity, address key issues, and provide access to the right tools, training, and expert talent. By investing in the three "P"s— **Products, Processes, and People**—continuous **productivity improvements** can be achieved.

THE CHALLENGE

Development Bottlenecks

- Time-consuming code reviews

- Inconsistent code quality

- Manual dependency management

Technical Challenges

- Growing technical debt

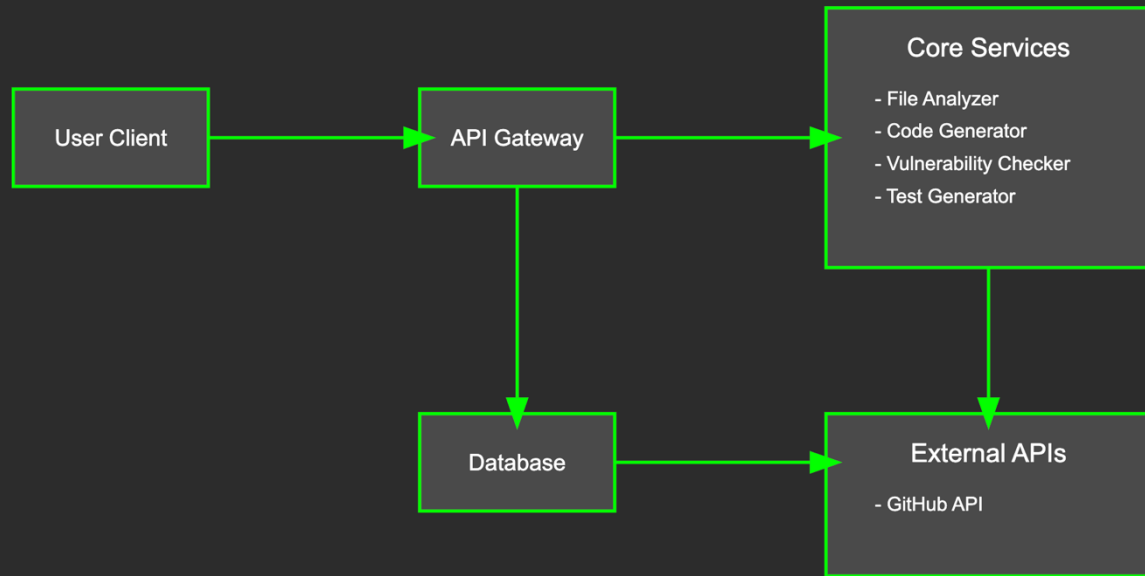- Security vulnerabilities

- Insufficient test coverage

THE SOLUTION
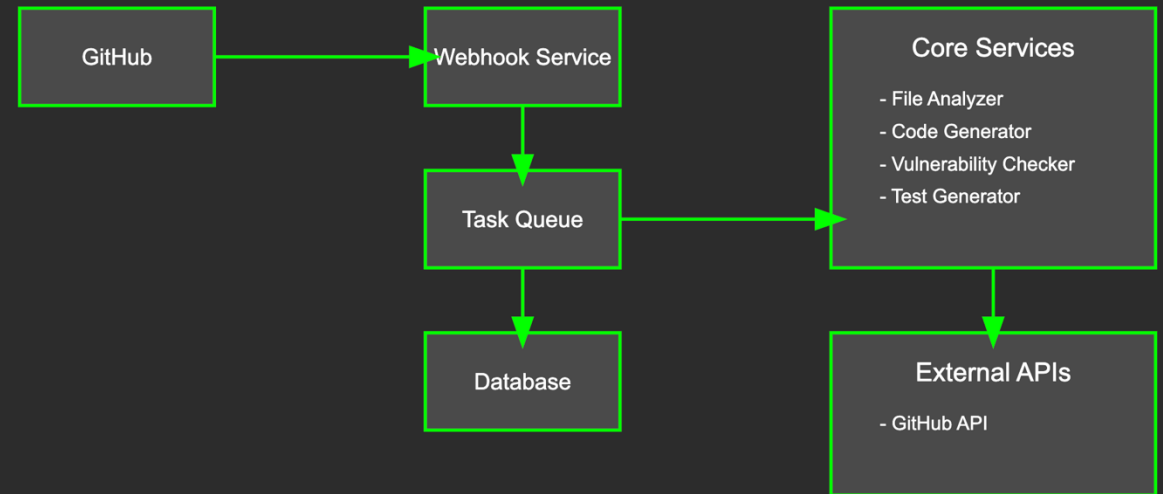
AI-Powered Development Assistant

1. Seamless GitHub Integration

2. Automated Code Analysis & Improvement

3. Security Scanning & Dependency Management

4. Test Generation & Quality Assurance

5. Technical Debt Detection & Management
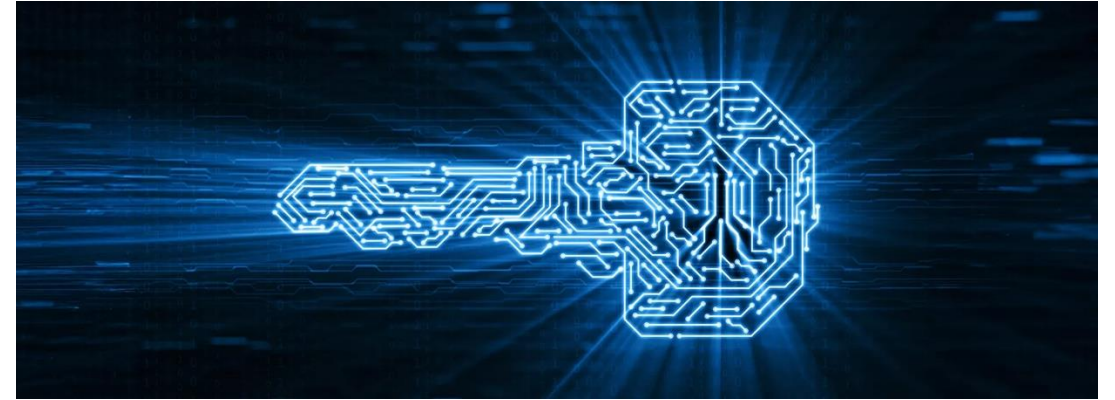
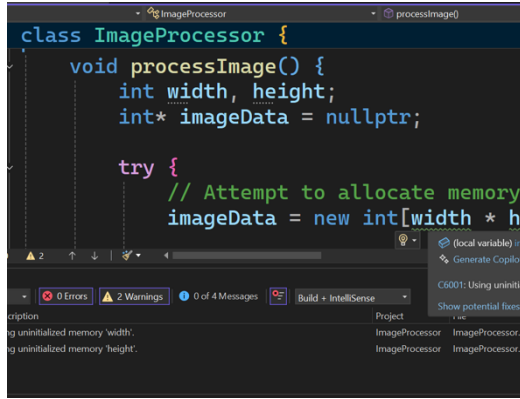# ARCHITECTURE

COMPONENTS

Core Components

- GitHub Integration

- Event Processing

- Analysis Services

Key Services

- Pull request and repository Analyzer

- Security Scanner

- Test cases generator

- Tech debt analyzer on repository or pull request

KEY FEATURES

Code Analysis

1. AI-Powered Review

2. Quality Enhancement

3. Standards Enforcement

Security & Testing

1. Sensitive Info Detection

2. Test Generation

3. Dependency Updates

Automation

1. PR Creation

2. Version Migration

3. Security Reporting

Integration

1. GitHub Webhooks

2. GitHub Copilot

3. GitHub API and Extensions

4. OpenAI Integration

IMPACTS & BENEFITS

For Developers

1. Reduced Manual Work

2. Improved Code Quality

3. Faster Development

For Organizations

1. Enhanced Security

2. Reduced Technical Debt

3. Standardized Processes

DEMO

Final Hackathon Demo Video

GitHub Repo: AI Powered Dveeloper's Best Friend

FUTURE ROADMAP

Upcoming Features

1. Enhanced test generation

2. Automated pull request creation

3. Extended security reporting

Long-term Vision

1. Advanced AI capabilities

2. Multi-language support

3. Custom rule engine

THANK YOU