Kanban Issue Tracking Application

By: Samantha Austin, Ayda Haydarpour, Peyton Ludwig, and Domenic Martin

Problem Statement

The lack of collaborative tools in the Software Engineering workforce negatively affects communication, and decreases company productivity which in turn results in poor productivity.

- Money
- Time
- General Product functionality

Proposed Solution

- Kanban issue tracking bot
  - Automates and streamlines the Kanban workflow to increase developer productivity

- Main features:
  - Bot automatically assigns issues to developers
    - Issues are assigned an:
      - Effort value
      - Required skills
      - Priority value
    - Tracks developer's:
      - Current workload
      - Skills
      - Experience level (junior-senior)
    - Data allows the bot to evenly distribute issues based on their priority

Proposed Solution Cont.

- Additional features
  - Dashboard shows the current status of each issue
    - Easy tracking of developer progress
    - Quick insights on team/developer performance
    - Easily identify bottlenecks
  - Integration with other tools
    - Jira
    - Github
      - Bot automatically creates git branches for each assigned issue
  - AI bottleneck prevention
    - Bot assigns a productivity score to each developer
    - Allows the bot to more effectively prevent bottlenecks

How the Proposed Work Relates to the Project Goal

The proposed solution addresses the problem of communication & productivity in software engineering teams by:

- Distributing tasks among team members to aid workflow

- Displaying current status of each issue to aid communication

- Helping prevent bottlenecks through AI features

- Integrating with existing systems for ease of use

Results from the Elicitation Technique

1. We used a **survey** as our requirements elicitation technique to gather insights on task-tracking tools for software engineers.
2. The survey was distributed to **CS students**, featuring a mix of **closed-ended and open-ended questions.**
3. The majority of respondents found **task-tracking tools very useful**, with common requests for features like **integration with existing systems** and a **user-friendly interface.**
4. These insights will **guide the development** of the issue tracking tool, ensuring it **meets the needs** of software engineers in project management.