**Definition of Ready - Sprint 1:**

* All user stories for the sprint are clearly defined and written.
* Acceptance criteria for each user story are complete and clear.
* User stories have been reviewed and approved by the product owner
* The scope of the sprint is agreed upon by all stakeholders.
* Data acquisition: Historical data have been successfully gathered
* Access to the public APIs is available, including API keys and documentation.

**Definition of Done - Sprint 1:**

**API Integration**:

* Public APIs are successfully integrated into the application.
* API responses are correctly handled and processed.
* Error handling for API calls is implemented and tested.
* API integration is documented with clear instructions for future reference.

**Wireframe Completion**:

* A complete wireframe of the application is created.
* Wireframe includes all key screens and interactions.
* Wireframe is reviewed and approved by stakeholders.
* Feedback from stakeholders is incorporated into the wireframe.

**Documentation**:

* Project documentation is complete and up-to-date.
* Documentation includes project overview, goals, and scope.
* API documentation includes details on endpoints, request/response formats, and usage examples.
* Wireframe documentation includes descriptions of screens and user flows.

**Code Quality**:

* Code is reviewed and approved by at least one other developer.
* Code adheres to the team's coding standards and guidelines.
* Unit tests are written and pass for critical components.
* Integration tests are performed and pass for API calls.

**Usability and Design**:

* Wireframe usability is tested with sample users or stakeholders.
* Design feedback is collected and addressed.
* Wireframe aligns with initial design guidelines and branding materials.

**Review and Approval**:

* All deliverables (API integration, wireframe, documentation) are reviewed and approved by the product owner.
* Sprint review is conducted, and feedback is collected from stakeholders.
* Any identified issues or bugs are logged and prioritized for the next sprint.

**Definition of Ready - Sprint 2:**

**User Stories Defined**:

* All user stories related to this functionality are clearly defined and written.
* Acceptance criteria for each user story are complete and clear.
* User stories have been reviewed and approved by the product owner and relevant stakeholders.

**Resources and Access**:

* Access to necessary public APIs (e.g., mapping, accident data, weather data) is available, including API keys and documentation.
* Development and design tools are set up and accessible.
* Team members have access to required systems and environments.

**Stakeholder Agreement**:

* The scope of the sprint is agreed upon by all stakeholders.
* Dependencies and risks have been identified and communicated.
* The sprint goal is understood and accepted by the team.

**Documentation**:

* Relevant documentation from Sprint 1 is available and accessible.
* Clear requirements and specifications for the new functionality are documented.
* Sprint review and retrospective and documentation from first sprint is available for team to access.

**Definition of Done- Sprint 2:**

**Functionality**:

* Users can input a location and average miles driven per year.
* The application displays a map image of the input location.
* The application displays a heat map of accident rates for the input location.
* The application provides an insurance assessment based on the input data.
* The application displays real-time weather conditions for the pinpoint area.

**API Integration**:

* Public APIs for mapping, accident data, insurance assessment, and weather data are successfully integrated.
* API responses are correctly handled and processed.
* Error handling for API calls is implemented and tested.

**User Interface**:

* The UI for the new functionality is implemented according to the approved wireframe or mockup.
* The input fields and output displays are user-friendly and intuitive.
* The design aligns with the overall branding and design guidelines.

**Validation and Testing**:

* Input validation is implemented to ensure valid location and mileage data.
* Unit tests are written and pass for critical components.
* Integration tests are performed and pass for API calls and data processing.
* Usability testing is conducted to ensure the new functionality is easy to use.

**Performance and Security**:

* The new functionality performs well under expected load conditions.
* User data is handled securely, following best practices and compliance requirements.

**Review and Approval**:

* All deliverables (functional code, UI, documentation) are reviewed and approved by the product owner.
* Sprint review is conducted, and feedback is collected from stakeholders.
* Any identified issues or bugs are logged and prioritized for the next sprint.

**Presentation**:

* A presentation is created to showcase the product, its direction, and team collaboration decisions.
* The presentation includes objectives, key features, and demonstration of the new functionality.

**Definition of Ready - Project**

The project tasks are considered ready to be started when the following criteria are met:

1. **Requirements and Specifications**:
   * Clear and detailed requirements for each deliverable (prototype, risk assessment module, prediction models, etc.) have been documented.
   * Acceptance criteria for each requirement are defined and agreed upon.
   * All necessary data sources and APIs for integrating reliable datasets have been identified and documented.
2. **Resources**:
   * Development team members with appropriate skills (e.g., front-end development, machine learning, backend integration) are assigned and available.
   * Required development tools, software, and hardware are identified and available.
3. **Data Availability**:
   * Access to reliable datasets for insurance premiums and geographical data is secured.
   * Initial data analysis and cleaning have been performed to ensure the data is ready for use.
4. **Design**:
   * Initial UI/UX design mockups and wireframes are completed and reviewed.
   * Architecture design for the application, including data flow and component interactions, is documented.
5. **Risk Management**:
   * Potential risks are identified, and a risk management plan is in place.
   * Contingency plans for major risks (e.g., data availability issues, model accuracy) are documented.
6. **Stakeholder Alignment**:
   * Stakeholders have reviewed and approved the project scope, objectives, and deliverables.
   * A communication plan is established to keep stakeholders informed of progress.
7. **Technical Setup**:
   * Development environments are set up, including version control systems and continuous integration/continuous deployment (CI/CD) pipelines.
   * Required libraries, frameworks, and dependencies are installed and configured.
8. **Legal and Compliance**:
   * Any legal or compliance requirements related to data usage and user privacy are identified and addressed.
   * Necessary permissions and consents are obtained for using and processing user data.

**Definition of Done - Project**

The project tasks are considered done when the following criteria are met:

1. **Application Prototype**:
   * A functional prototype of the insurance premium rating application is developed.
   * Users can input their location (postcode or street address) and receive an estimated risk rating (‘high,’ ‘more than normal,’ ‘normal’).
   * The prototype has been tested and demonstrated to stakeholders.
2. **Risk Assessment Module**:
   * The risk assessment module accurately calculates and displays risk scores based on user inputs.
   * The module has been tested with various inputs to ensure accuracy and reliability.
3. **Integration of Prediction Models**:
   * Machine learning models are integrated into the application for predicting risk scores.
   * The models provide accurate predictions based on historical data.
   * Model performance has been validated with a separate test dataset.
4. **User Interface Enhancement**:
   * The application has an intuitive and responsive user interface.
   * Users can easily input data, view risk assessments, and navigate the application.
   * Usability testing has been conducted, and feedback has been incorporated.
5. **Performance and Security Optimisation**:
   * The application performs efficiently, with fast response times and minimal latency.
   * User data is handled securely, following best practices for data protection and privacy.
   * Security testing (e.g., penetration testing) has been conducted, and vulnerabilities have been addressed.
6. **Data Integration**:
   * The application integrates with reliable datasets for insurance premiums and geographical data.
   * Data integration has been tested to ensure accuracy and consistency.
7. **Client Presentation Materials**:
   * Comprehensive client presentation materials have been prepared, including demonstrations, slides, and supporting documents.
   * A final presentation has been conducted, showcasing the application's features and benefits.
8. **Documentation**:
   * Complete documentation is provided, covering the application's architecture, codebase, user guide, and maintenance procedures.
   * Documentation is reviewed and approved by relevant stakeholders.
9. **Deployment**:
   * The application is deployed to a production environment and is accessible to users.
   * Deployment processes, including rollback procedures, are documented and tested.
10. **Stakeholder Approval**:
    * The final product has been reviewed and approved by stakeholders.
    * Any remaining issues or change requests have been addressed.