Milestone List:

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| **Milestone** | **Completion Date** | **Description** |
| Research and Planning | December 2024 | Learn about the existing scraper implementation and develop a plan for spring semester. |
| Technical Documents | Late January 2025 | Have all the necessary documents on technology specifications and requirements. |
| Support Documents | Late January 2025 | Have all the necessary documents on user support and troubleshooting guide. |
| User Interface Development | Late March 2025 | Fully working front-end user interface |
| Developer Interface Development | Late March 2025 | Fully working back-end developer interface |
| Testing and Debugging Interfaces | Early April 2025 | Testing and debugging both interfaces |
| Final Project Review | April 2025 | Final check through that all project requirements is meet. |

Timeline and Effort Matrix:

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| **Tasks** | **Start Date\*** | **Completion Date\*** | **Effort** |
| Redesign the existing scraper to allow users to target reviews of all products on a specific page of a website, instead of scraping the entire website. | January 6, 2025 | Early February 2025 | Almaamar 90%  Jason 5%  Matt 5% |
| Redesign the existing scraper to allow users to target reviews of a specific product on a website, instead of scraping the entire website. | January 6, 2025 | Early February 2025 | Almaamar 90%  Jason 5%  Matt 5% |
| Develop an executable (.exe) that allows users to easily launch the UI and automatically run all required dependencies for the scraper. | March 3, 2025 | April 2025 | Almaamar 90%  Jason 5%  Matt 5% |
| Test and validate the functionality and usability of both interfaces to ensure they meet specified requirements and perform as intended. | March 3, 2025 | April 2025 | Almaamar 90%  Jason 5%  Matt 5% |
| Document the entire project development process, including detailed steps for setting up, configuring, and running the application. Additionally, create comprehensive user guides for both business users and developers, outlining how to interact with the UI, manage scraping tasks, and monitor website changes. | January 6, 2025 | March 2025 | Almaamar 90%  Jason 5%  Matt 5% |
| Develop and refine the existing backend components of the scraper to be more user-friendly and adaptable to changes. | February 3, 2025 | Late March 2025 | Almaamar 5%  Jason 90%  Matt 5% |
| Research about advanced techniques that can improve the algorithms for more efficient data scraping and data storage optimization. | January 6, 2025 | Early February 2025 | Almaamar 5%  Jason 90%  Matt 5% |
| Develop and design a developer interface for developers to manage and update the scraper’s hardcoded components. | February 3, 2025 | Late March 2025 | Almaamar 5%  Jason 90%  Matt 5% |
| Test and troubleshoot to ensure that the integration within the existing systems are performing as intended. | March 3, 2025 | April 2025 | Almaamar 5%  Jason 90%  Matt 5% |
| Evaluate the existing user interface for the web scraper. Document findings. Note what works and what doesn't. Gather any prior design restrictions and evaluate them to see if they are still applicable. | January 6, 2025 | Early February 2025 | Almaamar 5%  Jason 5%  Matt 90% |
| Design a maintainable user interface following best practices. Document design choices. Study UI best practices and learn what common pitfalls to avoid. | February 3, 2025 | Late March 2025 | Almaamar 5%  Jason 5%  Matt 90% |
| Research frontend frameworks and make an informed selection for the project. Document rationalization for selection. Review user testimony for popular frameworks such as React, Svelte, Tailwind CSS, etc. Discuss with team the pros and cons of each and see which would be best for integrating with the rest of the tech stack. | January 6, 2025 | Early February 2025 | Almaamar 5%  Jason 5%  Matt 90% |
| Develop the user interface in the selected frontend framework. Document development process and how maintenance should be performed in order to maintain selected design patterns. Incrementally implement the features of the user interface. Collaborate on documentation for how the frontend will communicate with the backend. | February 3, 2025 | Late March 2025 | Almaamar 5%  Jason 5%  Matt 90% |
| Gather user feedback on the frontend user experience. Apply the feedback if reasonable and possible. Seek out possible test users to gather feedback on how the UI is presented, if the operation of the tool makes sense, etc. Apply any recommendations if they are applicable, and update documentation as needed. | March 3, 2025 | April 2025 | Almaamar 5%  Jason 5%  Matt 90% |
| Test user interface against multiple different aspect ratios to ensure it is operable and presentable on many different screens. Document any findings during this process. Ensure that the UI works on several common display sizes and orientations. | March 3, 2025 | April 2025 | Almaamar 5%  Jason 5%  Matt 90% |

\*Start and Completion dates are subject to change depending on the rate the tasks are being completed at.