| Task | Duration (Days) | Dependencies |
| --- | --- | --- |
| Identify store inventory features | 3 | None |
| Survey AR hardware options | 2 | None |
| Define success criteria | 2 | None |
| Assess warehouse layout | 3 | None |
| Collect user requirements | 3 | None |
| Design system architecture | 4 | Identify store inventory features |
| Select ML models | 3 | Collect user requirements |
| Choose OpenCV techniques | 3 | Collect user requirements |
| Create data flow diagrams | 3 | Design system architecture |
| Define API specifications | 3 | Design system architecture |
| Collect dataset images | 5 | None |
| Annotate dataset | 4 | Collect dataset images |
| Train object detection models | 7 | Annotate dataset |
| Develop AR overlay prototype | 7 | Train object detection models |
| Test prototype functionality | 3 | Develop AR overlay prototype |
| Design database schema | 4 | Design system architecture |
| Implement database | 4 | Design database schema |
| Develop REST API | 6 | Implement database |
| Integrate with inventory system | 4 | Develop REST API |
| Implement security | 3 | Develop REST API |
| Develop AR interface | 10 | Develop AR overlay prototype |
| Implement recognition and overlay | 7 | Develop AR interface |
| Integrate backend API | 5 | Develop REST API |
| Optimize app performance | 5 | Implement recognition and overlay |
| Integration testing | 5 | Integrate backend API, Implement recognition and overlay |
| Usability testing | 4 | Integration testing |
| Gather user feedback | 4 | Usability testing |
| Refine model accuracy | 6 | Gather user feedback |
| Improve AR interface | 5 | Gather user feedback |
| Deploy hardware and software | 5 | Improve AR interface |
| Conduct staff training | 4 | Deploy hardware and software |
| Prepare support documentation | 4 | Conduct staff training |
| Set support and maintenance plan | 3 | Prepare support documentation |
| Monitor system performance | 5 | Deploy hardware and software |