



VocalCart

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Target Market and Value Propositions



- For users with limited time to search and browse through categories.
- For individuals less familiar with digital interfaces, the platform offers a user-friendly e-commerce experience.
- AI powered semantic search based on user preferences.
- User can find products effortlessly through voice-based search.

Key Winning Features



- Enhanced user experience
- Accurate and Contextual Voice Recognition
- Intelligent Product Discovery

Capabilities

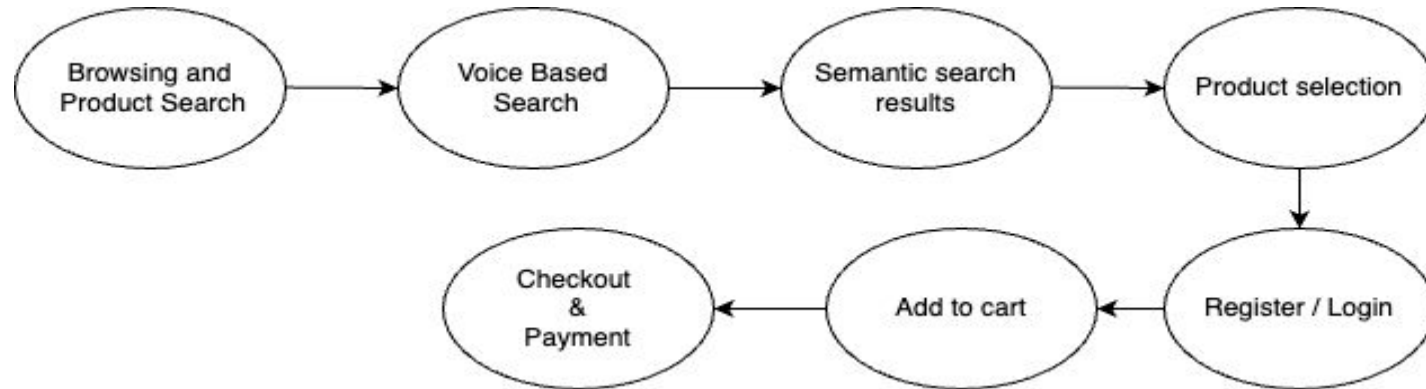
- **Natural Language Understanding:** Recognizes and processes user voice queries with semantic meaning.
- **Semantic Matching:** Understands user intent and retrieves the most relevant products.

Justifications

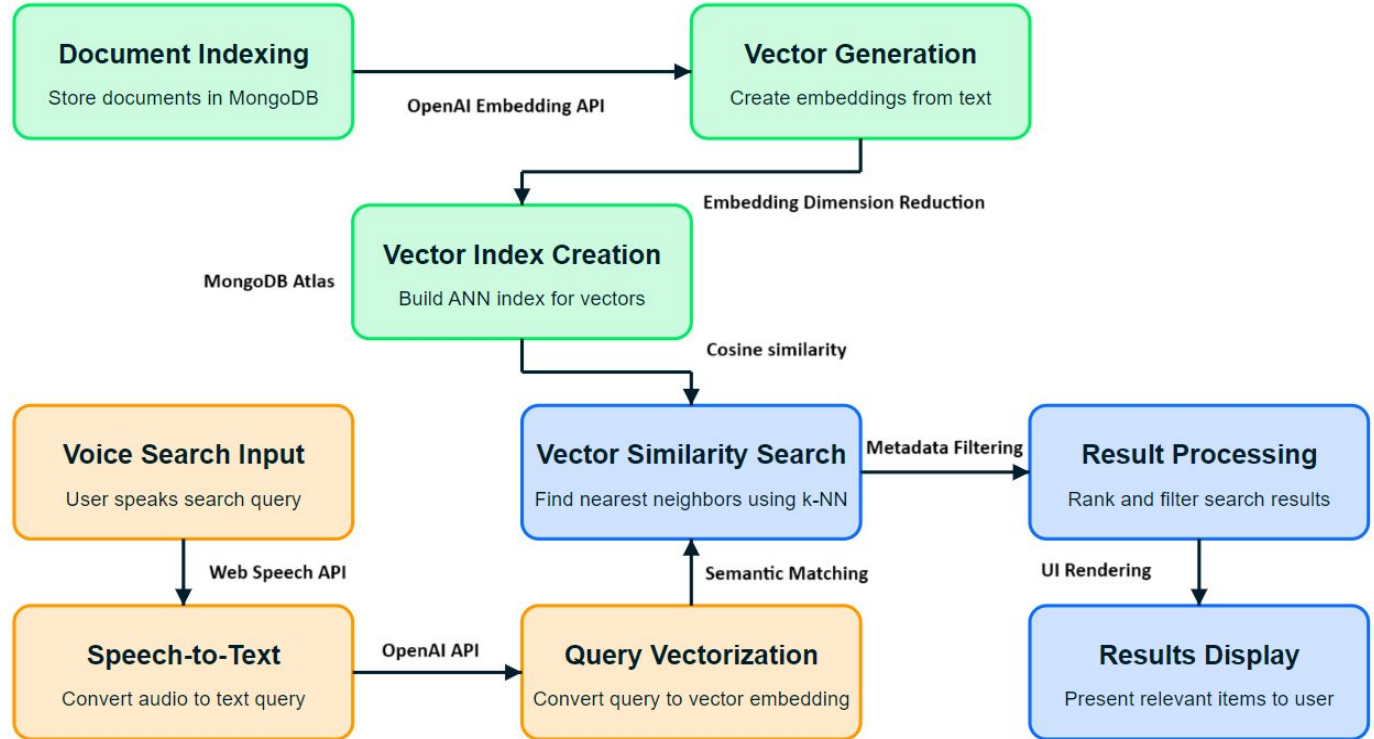


- **Faster and hands-free searching:** Enables users to search using voice commands reducing manual searching.
- **Contextual and intent driven results:** Interprets meaning behind user queries, which improves accuracy and delivers more relevant product recommendation.
- **Accessibility boost:** Provides inclusivity by enabling voice-powered shopping for users with disabilities.

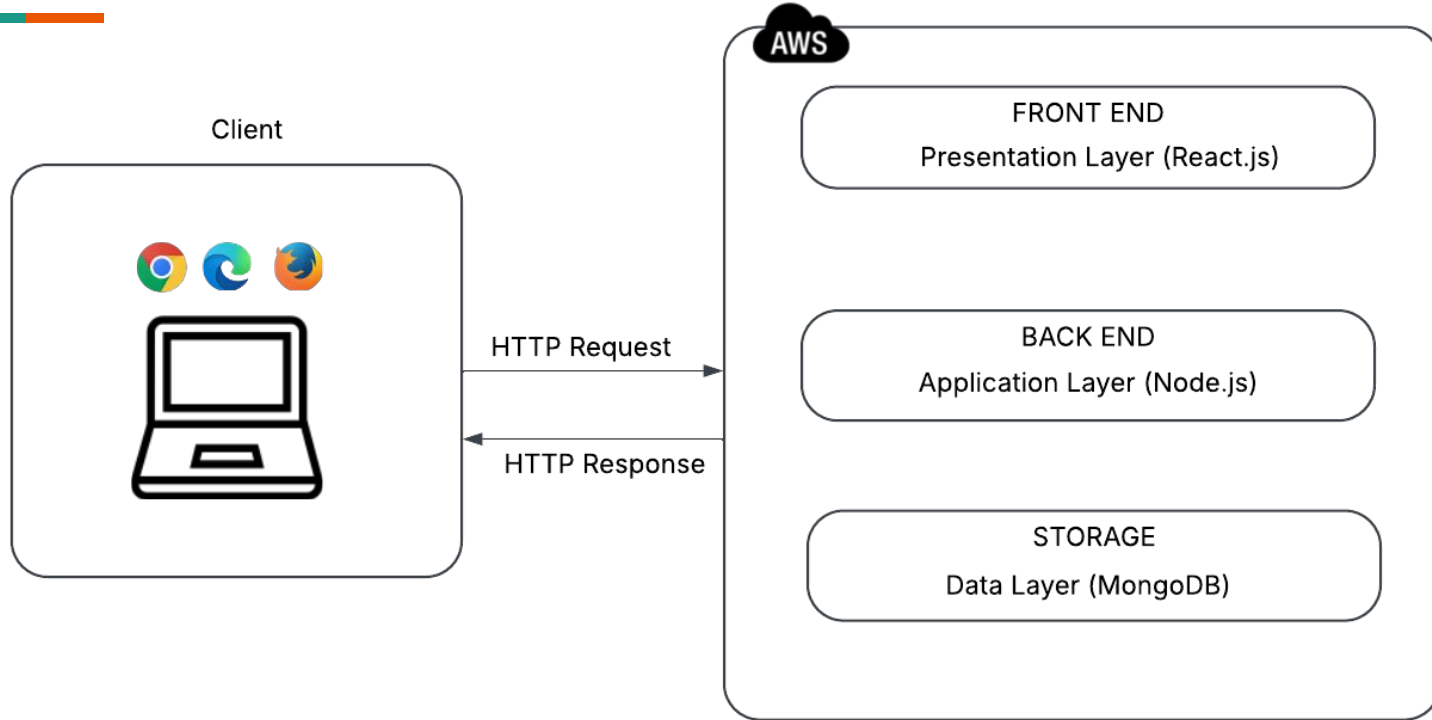
Workflow



System Overview



System Architecture



Implementation Plan



Week 1	Planning and System Design
Week 2	Voice based search implementation
Week 3	Semantic Search Integration
Week 4	Search Optimization & Product Display
Week 5	User Experience Enhancements & Testing
Week 6	Final Testing, Optimization & Deployment

References



- Google Cloud, "What is Semantic Search?" Google Cloud. Available: <https://cloud.google.com/discover/what-is-semantic-search>. [Accessed: Mar. 15, 2025].
- M. Maguire, "A review of usability guidelines for e-commerce website design," *Proc. Int. Conf. Human-Computer Interaction*, Loughborough, UK, 2023. Available: https://repository.lboro.ac.uk/articles/conference_contribution/A_review_of_usability_guidelines_for_e-commerce_website_design/24463222?file=42980458. [Accessed: Mar. 19, 2025].
- K. Singh, "The next generation of e-commerce search: Harnessing the power of LLMs and vector databases," *Medium*, Mar. 19, 2024. [Online]. Available: <https://medium.com/@singhkundan/the-next-generation-of-e-commerce-search-harnessing-the-power-of-llms-and-vector-databases-67be0387542b>. [Accessed: Mar. 21, 2025].