

RealEase: Comprehensive Real Estate Insights Platform

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Project Goals

Streamline Home Search:

Deliver clear, accessible information to enable users to make well-informed decisions.

Empower Users: Provide robust tools for buyers and investors to identify their ideal Home using advanced comparison tools, a real-time ROI calculator, and a Neighborhood Insights Dashboard.

Motivation



Address Challenges: Overcome high entry costs, poor user experience, and outdated information present in current platforms.

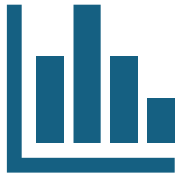


Provide Affordable Solutions: Offer a cost-effective, user-friendly platform with real-time neighborhood insights and comprehensive data.



Enhance User Experience: Deliver accurate, accessible information through an intuitive interface without financial constraints.

Approach & Key Features:



Neighborhood Insights Dashboard:

Explore detailed neighborhood data, including schools, crime rates, demographics, and local amenities.

Access information via interactive maps and comprehensive reports.



Detailed House Comparison:

Compare properties with detailed attributes such as price, square footage, and unique features.

Streamline decision-making with a centralized overview of potential homes.



Real-Time ROI Calculator:

Evaluate the financial potential of properties with real-time calculations based on user-defined parameters.

Analyze net profit, ROI, cash-on-cash return, and IRR.

Novel Features



Up-to-Date Insights: Integration of advanced APIs for real-time community data and detailed home comparisons.



Comprehensive Tools: Unique tools for neighborhood ratings, property comparisons, and ROI calculations.



User-Centric Design: Intuitive interface and detailed analysis to support informed investment and home-buying decisions.



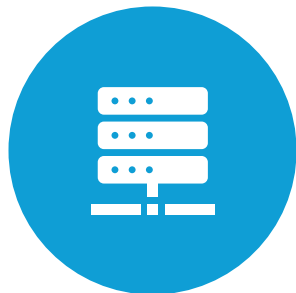
Algorithms and Tools



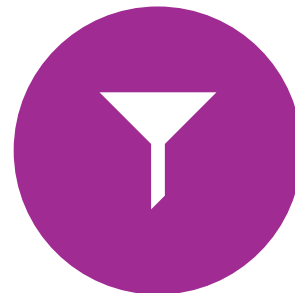
MERN Stack: HTML, CSS, JavaScript, MongoDB, Express, React, and Node.js for full-stack development.



Python: Data retrieval and integration through APIs (HomeHarvest, Google Places, Yelp).



Hosting: DreamHost.



Collaborative Filtering: Algorithm to identify and display similar houses.

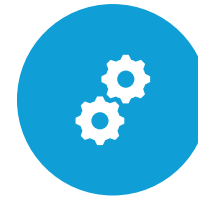
Technical Challenges



Data Integration: Managing real-time data from multiple sources, handling different formats, and ensuring accuracy.



ROI Calculator Development: Designing complex financial algorithms and user interfaces.



Scalability: Ensuring responsiveness and performance with MongoDB as the backend.

Milestone 1 (Sep 30)

Tasks:

- Select technical tools and frameworks (React, Node.js, MongoDB).
- Evaluate and integrate APIs.
- Develop "Hello World" demos for front-end frameworks and backend setup.
- Resolve initial technical challenges (data aggregation, MongoDB setup).

Deliverables:

- Requirements and design documents.
- Basic demos and initial tool evaluations.

Milestone 2 (Oct 28)

Tasks:

- Implement Neighborhood Insights Dashboard and test functionality.
- Build and integrate a Real-Time ROI Calculator.
- Develop a Scoring Algorithm for house recommendations.

Deliverables:

- Working demos of key features.
- Feedback collection from stakeholders.

Milestone 3 (Nov 25)

Tasks:

- Final integration of all features.
- Complete system testing, including load and usability tests.
- Optimization and performance tuning.
- Final demo and feedback collection.

Deliverables:

- Complete application with all features integrated.
- Final documentation and user guides.

Task matrix for Milestone 1

| Task | Jonathan | Donovan | Enrique |
|--|-----------------------|---|---|
| Compare and select Technical Tools | Integration and | Backend Plan | GUI UX/UI |
| Provide small ("hello world") demo(s) to evaluate the tools for | Process housing data. | Cache data and test full stack integration. | Front-end dev and functional javascript code. |
| Resolve technical challenges: | 60% | 20% | 20% |
| Compare and select collaboration tools for software development | 15% | 70% | 15% |
| Compare and select tools for financial calculations and specifically what information the user will enter. | 70% | 10% | 20% |
| Design and Requirements | 30% | 40% | 30% |
| Test Plan | 15% | 70% | 15% |