



INTRODUCTION AND MOTIVATION

No Limit Living is a real estate company committed to providing seamless property search experiences for buyers, sellers, and renters. Our team was tasked with enhancing the company’s website to improve usability, functionality, and user experience. We focused on two key areas:

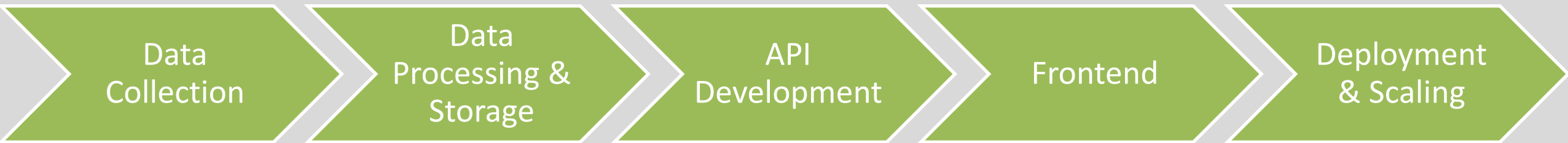
- 1) **Website Redesign:** Revamped multiple pages to create a cleaner, more engaging interface aimed at increasing web traffic and driving user participation.
- 2) **Live Statistics Dashboard:** Built an interactive tool using Zillow and Census data to visualize real-time housing insights - including market trends, affordability, and demographics – with the goal of creating a one-stop shop for prospective homeowners to make informed decisions.

METHODOLOGY

For **website redesign**, the team utilized **Figma** to create mockups and developed a responsive, visually appealing website using **WordPress** and **Elementor**. These tools enabled us to:

- Streamline the design process
- Accelerate development
- Enhance visual consistency
- Ensure mobile responsiveness and cross-device compatibility

The team used the pipeline below to aggregate and visualize real-time housing data for the **Live Statistics Dashboard**:



- The backend, built with Node.js and Express.js, collects real estate data from Zillow and demographic data from the Census API.
- Data is cleaned with Python and Pandas; Zillow data is stored in MongoDB, while Census data is fetched live via API.
- The API built with Express.js and Node.js offers endpoints to access housing and demographic data by location, including county FIPS code and city statistics.
- The React and Material UI frontend features state and county search with Chart.js, and visualizations showing trends in housing prices, rent income, and market competitiveness.
- Deployment and scaling considerations include backend hosting on AWS, Render, or Vercel, database storage with MongoDB Atlas, frontend hosting via Vercel or Netlify, and security measures like rate limiting and API protection.

ACKNOWLEDGEMENTS

We would like to thank Emmani Ellis, the CEO of No Limit Living, for giving us the opportunity to contribute to the company. A huge thank you to our mentors Sharan Sivakumar and Endy Munoz, our TA, Akshitha Kartigueyan and the Data Mine Staff for guiding us.

PROGRESS

We redesigned the *Home*, *About Us*, *Services*, *FAQs*, *Contact Us*, *Portfolio*, and *Login/Sign Up* pages keeping the following key enhancements in mind:

- **Enhanced Storytelling**
Personalized narratives to strengthen emotional connection with users and added engaging images and videos to make content more immersive, improving user retention and interaction with the website.
- **Improved Call-to-Action (CTA)**
Strategically placed clear CTAs to guide users effortlessly with an intuitive design to ensure key actions are noticeable, reducing friction and increasing engagement.
- **Optimized Navigation**
Added functional buttons to enhance usability and arrow controls to improve scrollability, with a fully responsive design that adapts seamlessly across devices, providing a smooth and intuitive experience.

We implemented the following functionality for the Live Statistics Dashboard:

- **Housing Market Tool**
Users can select by county and city to display Zillow housing data, enhancing localized real estate insights.
- **Demographic Metrics Panel**
Selection by state and county is supported allowing access to key metrics such as household income, rent, and more for a broader regional analysis.

Have any questions?

Click here for some quick answers!

FAQs



Call to Action



Enhanced Storytelling



Optimized Navigation

CONCLUSION

- The intuitive, dynamic interface and visually appealing layout of the website ensure seamless navigation and engagement for users of all technical backgrounds.
- The addition of a live statistics page helps first time homeowners make important decisions regarding real estate investment by offering real time statistics in a visually digestible format.
- Through hands-on experience, we deepened our understanding of design principles, front-end development, and user-centric thinking.

Live Statistics Page

Welcome to the Real Estate Live Statistics Tool, your go-to platform for real-time insights into the housing market. Whether you're exploring property trends, analyzing market values, or understanding regional dynamics, this tool provides accurate and up-to-date data to guide your decisions. Stay informed with live updates and make smarter choices in the ever-changing world of real estate.

- **For-Sale Inventory (fs):** The total number of unique listings active at any time during a given month.
- **Market Heat Index (mhi):** A measure of supply and demand balance in a housing market, where higher values indicate a seller-favorable market.
- **New Homeowner Income Needed (nhin):** The estimated annual household income required to afford a typical home purchase with a 20% down payment while keeping housing costs below 30% of income.
- **Sales Count (sales):** The estimated number of unique properties sold in a given month, adjusted for reporting delays.
- **Zillow Home Value Index (zhvi):** A measure of typical home values and market trends based on homes in the 35th to 65th percentile range.
- **Zillow Observed Rent Index (zori):** A smoothed index of typical market rents, weighted to reflect the entire rental housing stock.

Search by state

DC

You selected: District Of Columbia

Search by city

Washington

Bar chart that illustrates the New Homeowner Income Needed in Auburn, AL



State: Florida

Median Income: \$73,283
Poverty Rate: 12.4%
Home Value: \$325,000
Rent: \$1,564
Ownership Rate: 67.32%
Vacancy Rate: 15.19%
Median Age: 42.6
Household Size: 2.51
Population: 21,928,881
Year: 2023

County: Brevard County, Florida

Median Income: \$77,961
Poverty Rate: 10.3%
Home Value: \$304,400
Rent: \$1,456
Ownership Rate: 76.92%
Vacancy Rate: 14.46%
Median Age: 46.8
Household Size: 2.43
Population: 620,533
Year: 2023

County: DeSoto County, Florida

Median Income: \$54,288
Poverty Rate: 18.8%
Home Value: \$151,500
Rent: \$910
Ownership Rate: 71.31%
Vacancy Rate: 19.46%
Median Age: 42.8
Household Size: 2.49
Population: 34,719
Year: 2023

County: Bradford County, Florida

Median Income: \$59,468
Poverty Rate: 15.4%
Home Value: \$180,300
Rent: \$838
Ownership Rate: 70.86%
Vacancy Rate: 15.91%
Median Age: 40.5
Household Size: 2.64
Population: 27,888
Year: 2023

FUTURE GOALS

Moving forward, our goals for **website redesign** include:

- Building fully personalized *user profiles* post-registration
- Creating a comprehensive *Listings page* featuring an inventory of properties with an interactive map
- Integrating a *chatbot* to assist users with questions and navigate throughout the site

For the **Live Statistics Dashboard**, we plan to:

- *Expand our dataset* to include other public data sources for analyzing other variables that can impact the housing market
- *Automate* the web scraping process
- Improve the user experience with additional *filtering and comparison* tools