

Real Estate Website Stage 1 Report

Jiayang Lai,Wenjie Li,Junhui Chen

6344824, 5748389, 6828214

COSC 3P94: Introduction to Human Computer Interaction

Instructor: Dave F. Bockus

Teaching Assistant: Aws AI Jumaily

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Section 1: User Requirements.

1. The role of each Actor.

There are generally two actors on estate websites, individual users and the agent.

Two major roles of individual users are buyers and sellers. Buyers want to buy a property and sellers want to sell their owned property. The agent provides transaction services in between.

2. Security.

Security is a major concern of all users. Websites should guarantee user security in case of any potential risk that someone may post false information or attempt to sell properties that don't belong to them. To this end, the websites must have a rigorous verifying system. For example, users who want to sell a house cannot upload the property themselves onto the websites. Instead, a majority of websites only accept the listing when users have their property registered in MLS, in order to achieve this, there must be an agent that retrieves the information of the house from the owner and verifies every detail of the property.

3. Services Presented.

After an evaluation of several existing real estate websites, we determined several important services should be provided to our users.

- Search function with highly customizable options.
- View exterior/interior of properties.
- Provide bidding, contact option for buyers.
- Save their favorite house(When user logged in)
- Help them to make an estimation for the mortgage.

-Let user know about the Neighborhood of the house

-Provide some similar house for user

4. Navigation.

Users browse the website through the navigation bar, which is fixed at the top position of each website. Navigation bar allows users to easily switch features. Navigation bar also lets the user know what the main service(Sell & Buy) we provide. Navigation bar provides the search function for the user, and the user can use the filter to find what they really want.

5. User Input.

Mouse is the majority of user input, users will use mouse two scroll and click to browse websites and switch pages, keyboard is also involved when searching keywords of property, and if the user wants to sign in/ login an account, they need to type the information themselves.

6. Tools to Personalize the Experience.

At the search page, users should be allowed to choose a type, number of bedrooms and range of price for properties. Our website will also provide users with more personalized options, such as living areas and bathrooms, we will also allow users to choose what surrounding infrastructures can be near the house, such as hospital, school and fitness center.

7. Organization and Layout.

Main page:

-Navigation bar are always fixed at the top of each website

Search page:

- Search page will have a search bar just below the navigation page.
- When the user does not search anything, this page will list several features properties, when the user searches something, this page will display the most relevant properties based on the user's keywords.

Buy page:

- Buy page will post the listing of the house by the region where you are interested in or show the listing depending on your keywords in searching or the tool option(house type, the number of bedrooms and bathroom and so on).

8. User Experience.

UX features will be implemented based on our website analysis and survey result. Based on our survey result, demand for property interier/exterior viewing and simple search features are high therefore these will be considered when we are working toward UX design.

Section 2: Website Analysis

We analyzed the following three real estate websites.

(1) <https://fairsquare.ca/on>

(2) <https://www.zolo.ca/>

(3) <https://www.realtor.ca/en>

Analyze: FairSquare.ca

Home Page:

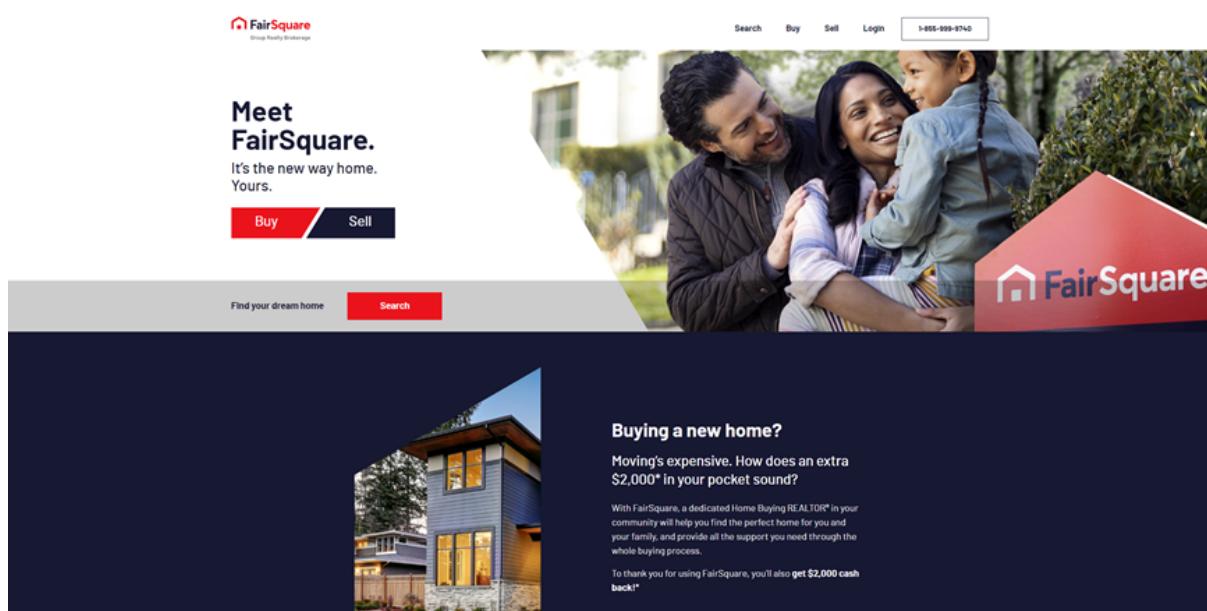


Figure 1: Home Page, Fairsquare

Search Page:

The screenshot shows the FairSquare website's search interface. At the top, there is a navigation bar with links for 'Search', 'Buy', 'Sell', 'Login', and a phone number '1-855-999-9740'. Below the navigation is a search bar with placeholder text 'Search by City, MLS® #, FairSquare #, or Address' and a dropdown menu for 'Types of properties'. A date range selector shows '50' and 'Unlimited'. To the right are dropdown menus for 'Bedrooms' and 'More criteria', and a 'Find a home' button.

Featured homes:

- Mount Hope \$899,900 FairSquare
- Niagara Falls \$774,900 FairSquare
- Mississauga \$699,900 FairSquare
- Ottawa \$699,000 FairSquare
- Ottawa \$749,000 FairSquare
- Brampton \$999,900 FairSquare

Search results: 14116 properties found. A dropdown menu allows sorting by 'New listings first'.

Properties displayed:

- Kitchener:** \$499,900 FairSquare. Description: Condominium for sale - Great 2 bedrooms, 2 bathroom unit with 5th floor views. Features updated.
- Toronto:** \$788,000 FairSquare. Description: Condominium for sale - Toronto's Most Sought After Neighbourhood At Front And Bathurst. Immaculate...
- Port Hope:** \$699,900 FairSquare. Description: House for sale - Charming bungalow in beautiful Port Hope! Hardwood flooring on main (2021), vinyl...

Free info sessions:

- Online | February 28th
- Online | March 1st
- Online | March 3rd
- Online | March 7th
- Online | March 8th
- Online | March 10th
- Online | March 16th
- Online | March 18th

Buttons: 'List' (radio button selected), 'Map', and a red 'Register' button.

Figure 2: Search Page, Fairsquare

Buy Page:

The screenshot shows the FairSquare 'Buy' page. At the top, there is a navigation bar with links for 'Search', 'Buy', 'Sell', 'Login', and a phone number '1-855-999-9740'. Below the navigation is a large banner with the text 'Buy your dream home, get cash back!' and a subtext 'Our local Home Buying REALTORS® are with you every step of the way'. To the right of the banner is a photo of a smiling couple looking at a laptop screen.

Welcome to your better home buying experience

With FairSquare, find your dream home and get \$2,000* in cash back! We pair you up with a Home Buying REALTOR® in your neighbourhood whose only job is to find the perfect home for you and your family. They are dedicated to home buyers and are with you every step of the way, from figuring out the must-haves in your new home, right through to handling the offer process.

Ready to find your dream home?

Success Story: A man in a suit is sitting at a desk, smiling and talking on a phone.

Figure 3: Buy Page, Fairsquare

Sell Page:

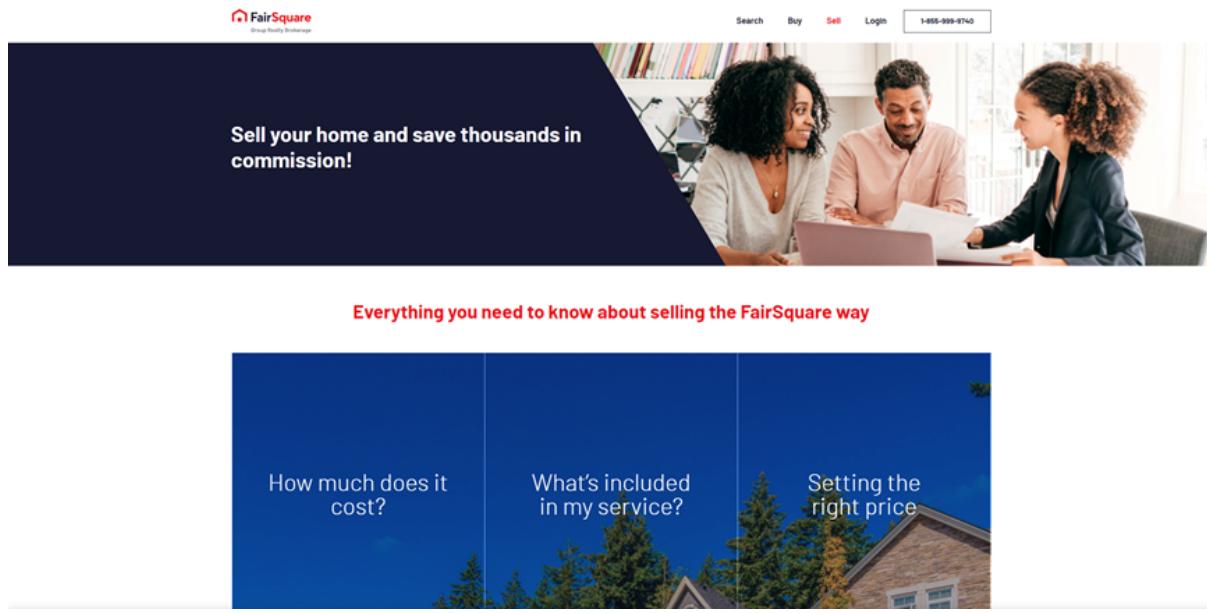


Figure 4: Sell Page, Fairsquare

Login Page:

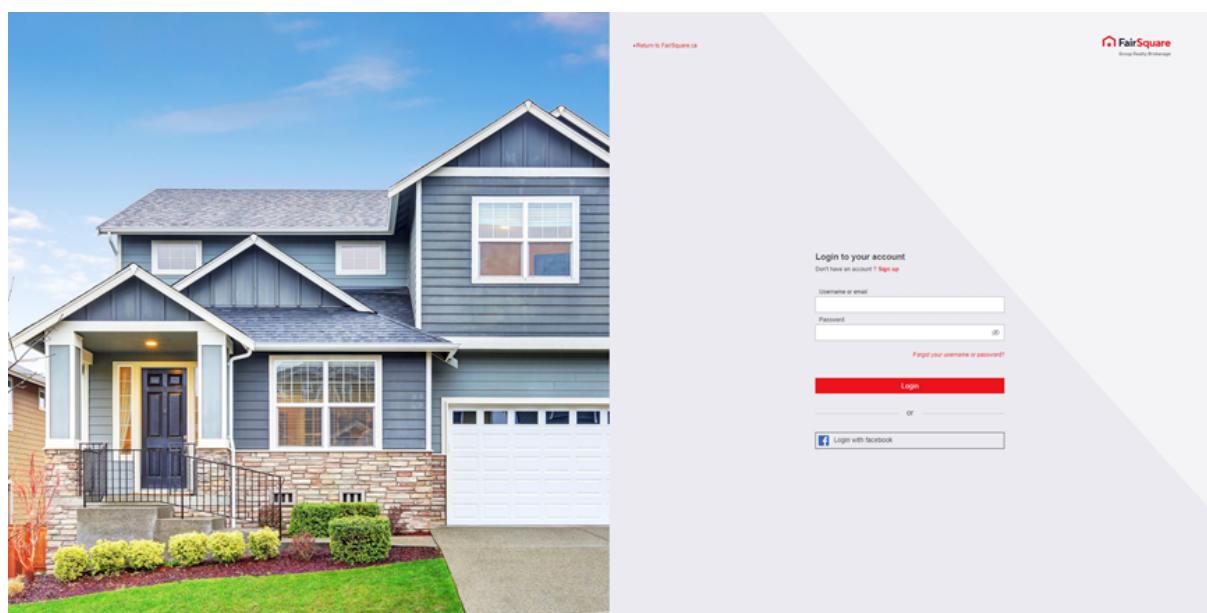


Figure 5: Login Page

Detail View Page:

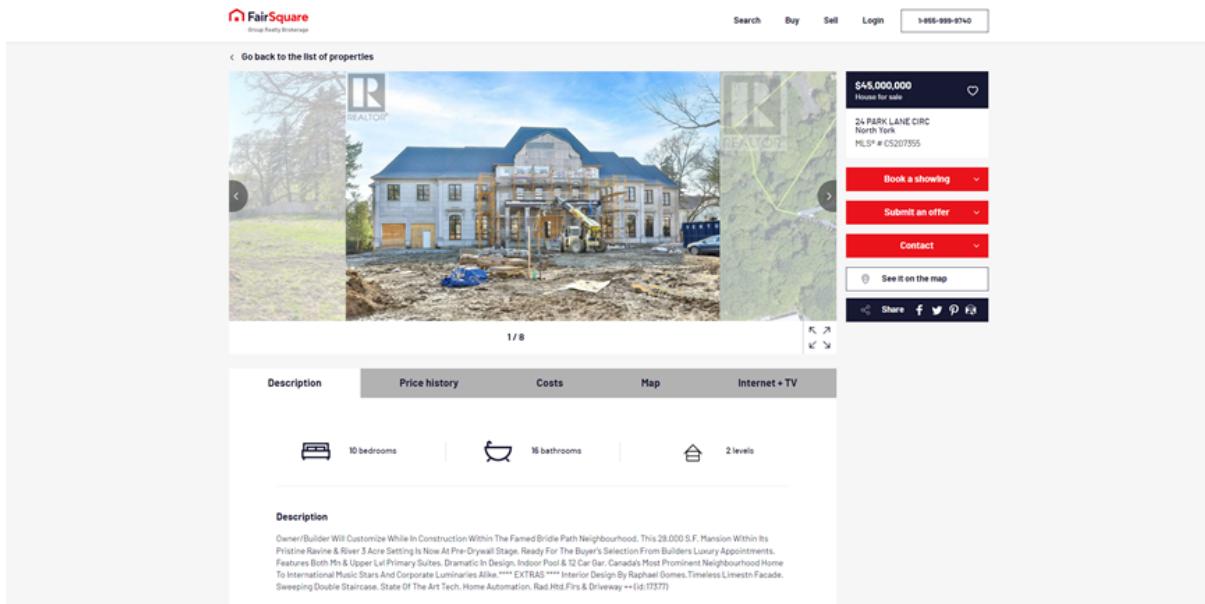


Figure 6: Detail View Page, Fairsquare

Analyze:

1. Navigation bar is fixed on the top of the website every page except the login page which allows users to switch from Search, buy, sell and login.
 - a) We can always find these options no matter what site we are currently viewing.
2. Search page listed several properties that are available for purchase.
 - a) 55% of property listing elements listed the picture of the exterior of the house.

- b) 15% of listing element display the price of the house and the location of the house
- c) 30% of listing elements display the specific address, broker's name, and short description of the house, when applicable, it also displays number of bedrooms, number of bathrooms and space.
- d) The search bar has various options to select, including price range, type of property, bedrooms. Users can also select more criterias based on their preference.

3. Buy page gives a clear explanation of how their REALTOR can positively contribute toward house buyers' experience.

4. Sell page gives a brief introduction regarding selling services provided by FairSquare.

5. Login Page allows users to register an account and login via registered account and facebook.

- a) Left 50% portion is a picture of a well-looking detached house.
- b) Right 50% portion is the login interface.

6. Detailed view page allows users to browse more details and several pictures of the property.

- a) Users can book a showing, submit an offer and contact regarding the property.
- b) More details are provided such as fully detailed description, price history, cost and location indicated on map.

Visual HTA:

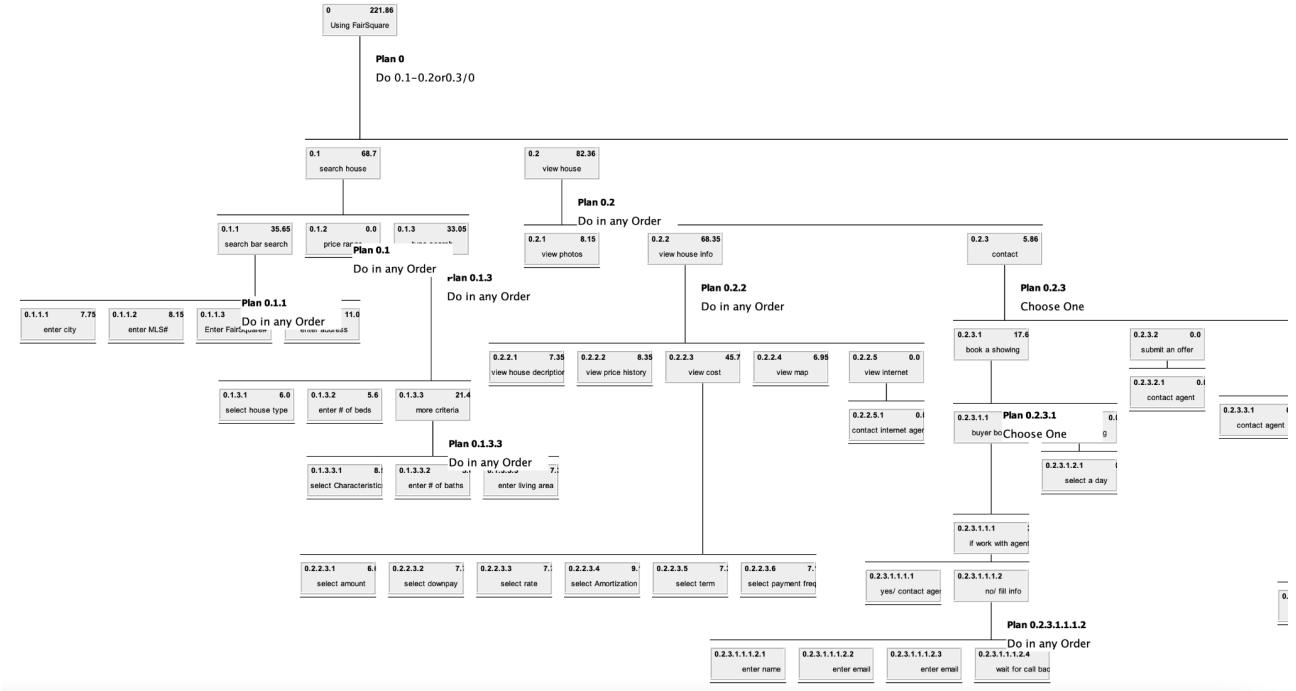


Figure 7 : Visual HTA with KLM Fairsquare, Part 1

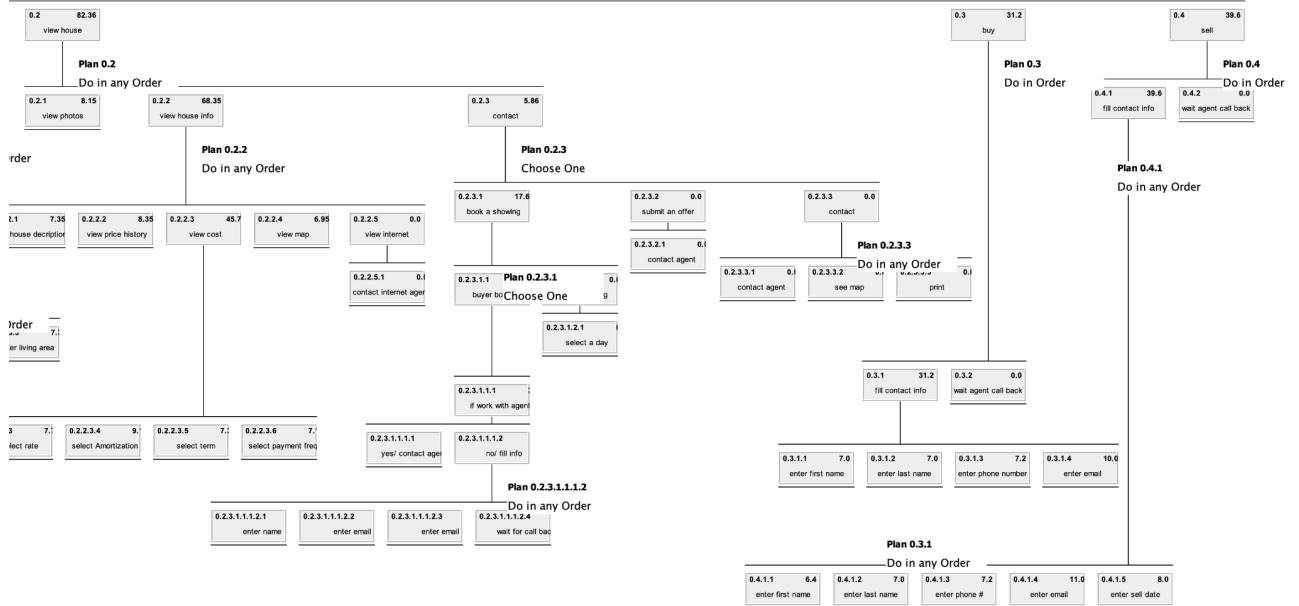


Figure 8: Visual HTA with KLM Fairsquare, Part 2

Analyze: REALTOR.CA

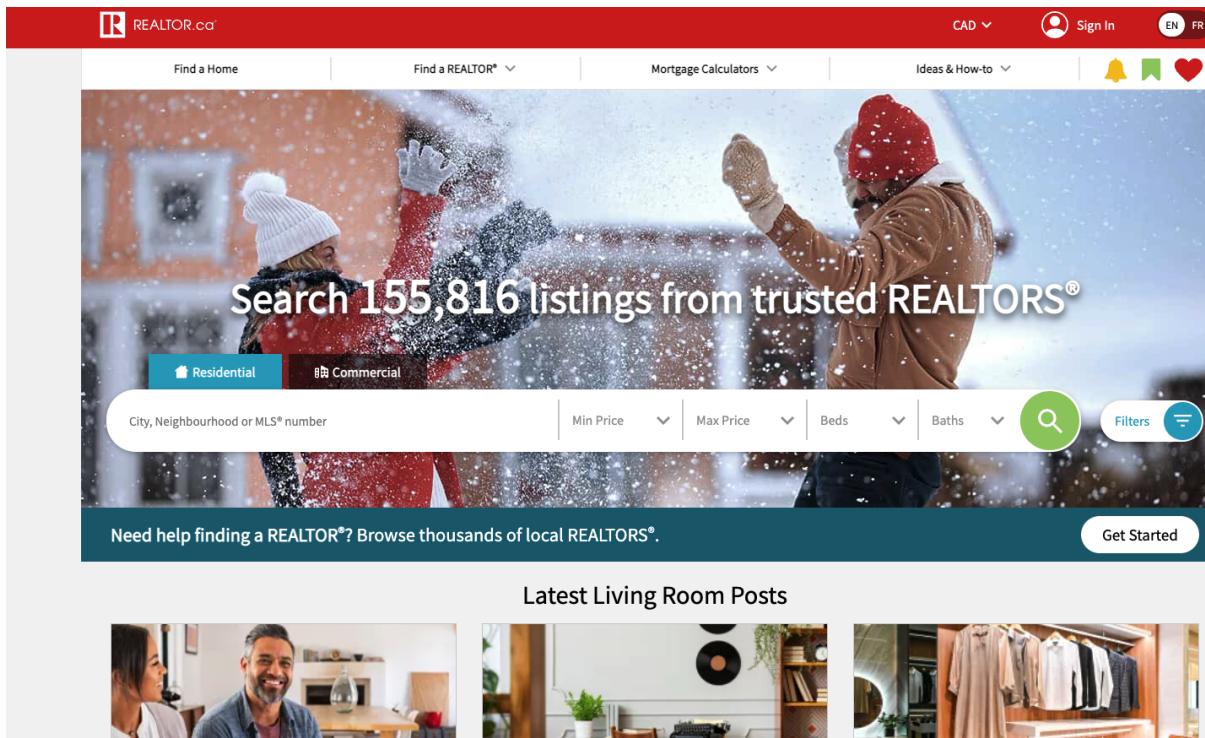


Figure 9: Home Page, Realtor.ca

Search page:

At the beginning of the map, the realtor.ca has the clear information such as the search box, the min price, the max price and how many beds and baths option. If users want to google something, they do not need to login to this website and they will get the most useful information. Also, the website will show the residential option and commercial option. It is easy to distinguish the sort of users.

Buy page:

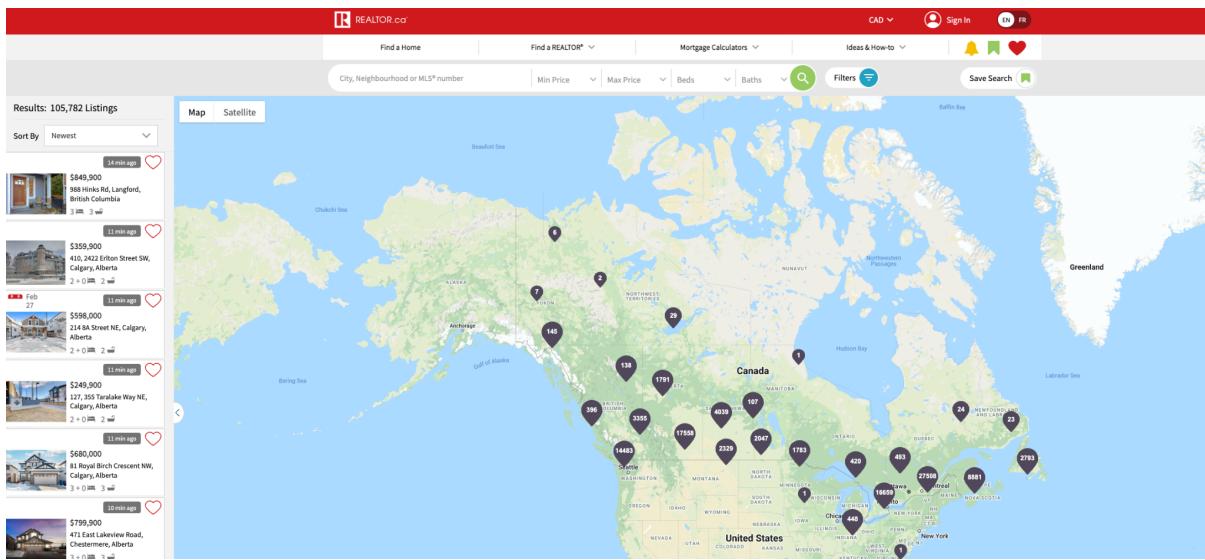


Figure 10: Search Page, Realtor.ca

On the search page, we will see the United States and Canada. There are more than 105,000 listings on this page. For instance, users can choose more specific options such as Ontario and Toronto as they need. The option will automatically show tons of the listing on the website based on their choice.

Login page:

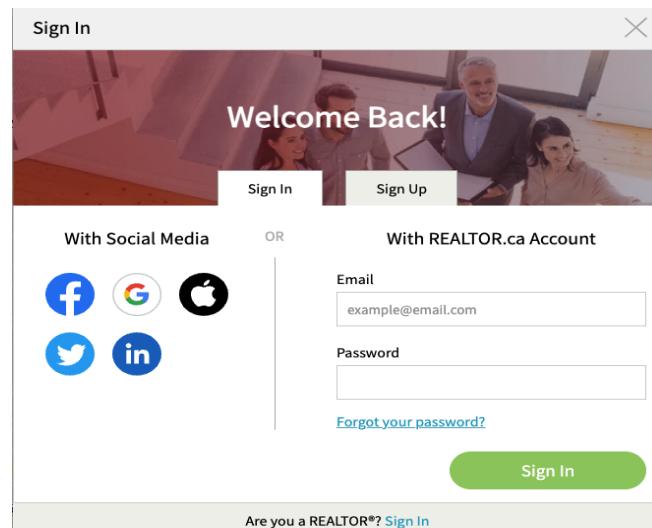


Figure 11: Login Page, Realtor.ca

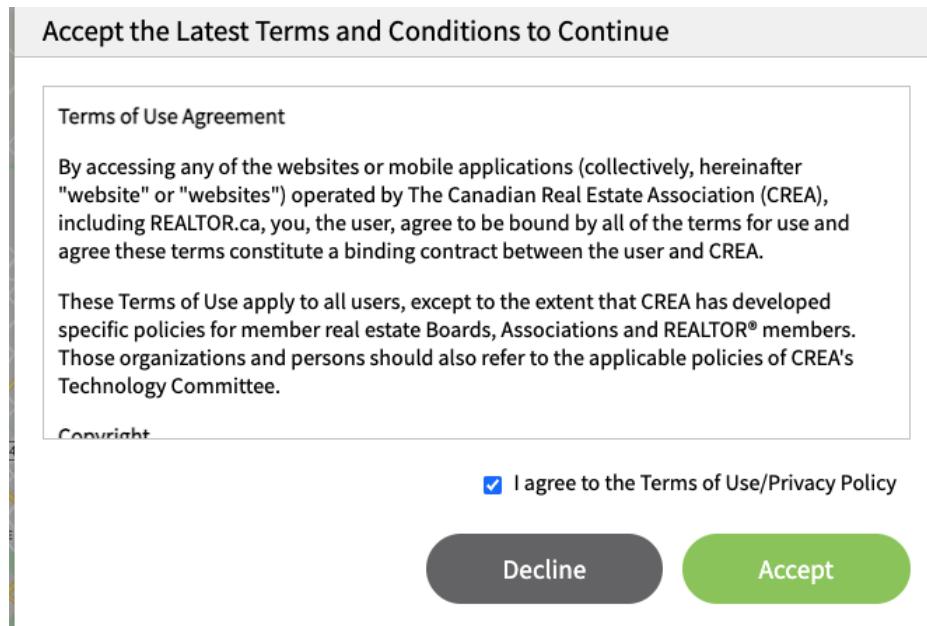


Figure 12: Login Terms and Conditions, Realtor.ca

The screenshot shows a survey section titled "More About You". It starts with a general statement: "Get the most out of your REALTOR.ca experience." Below this, there is a question "I am a:" followed by a dropdown menu. The menu items are: No Preference (selected), First time buyer, Repeat buyer, Seller, Residential investor, and Commercial investor. There is also a "COMMUNICATIONS" section containing a checkbox for "Send me updates on the latest REALTOR.ca features, promotions, trends and insights." At the bottom of the section, there is a note: "You can withdraw your consent at any time by clicking the \"unsubscribe\" link from the email, or by updating your Communication Settings." At the very bottom of the page, there is a footer note: "The Canadian Real Estate Association, 200 Catherine Street, 6th Floor, Ottawa, ON, K2P 2K9, support@crea.ca". A "Finish" button is located at the bottom right.

Figure 13: User Information Collection, Realtor.ca

When users are trying to add notes and click the red heart button as their favorite condo or house. The Realtor.ca will request them to register their account. As the new register, users have to accept some of the terms, conditions and policy to continue the registration. In addition, the website will ask more about the newcomer such as first time buyer, seller or investor.

buy and sell example:

#301 -57 UPPER DUKE CRES

\$688,000

#301 -57 UPPER DUKE CRES
Markham, Ontario L6G0B9
MLS® Number: N5513237

2 hours ago

1 + 1 Bedrooms 1 Bathrooms

Add Notes Favourite

KATY LAI
Salesperson

905-888-8188 Email Book showing

Highlights **Neighbourhood** **Statistics** **Calculators**

Description
Downtown Markham Prime Location, 685 Sq Ft. 9' Ceiling, 1 Bedroom + Den With French Door (Could Be The 2nd Bedroom). Many Restaurants And Shopping, Major Grocery Stores, Cineplex, Ymca, Close To 407, Go Unionville Station, Viva Bus In Steps Away.**** EXTRAS **** Stainless Steel Fridge, Stove, Microwave With Rangehood, Built-In Dishwasher, Front Loaded Washer & Dryer, Granite Counter top + Breakfast Bar, All Light Fixtures & Window Covering, One Locker & One Parking Close To Elevator. (29586651)

Property Summary

Property Type Single Family	Building Type Apartment	Community Name Unionville	Title Condominium/Strata
Annual Property Taxes \$2,025.68	Parking Type Underground, Visitor Parking	Time on REALTOR.ca 2 hours	

Building

Bedrooms	
Above Grade 1	Below Grade 1
Bathrooms	
Total 1	

Figure 14, Property Listing Page, Realtor.ca

When users click on the desired house or condos, It will show the picture, asking price and description. They will know most of the information about this property.

Analyze:

- a) On realtor.ca, users can see the clear picture of the condo and house.
- b) People can read the information which is about the property summary which includes the price, the number of bedrooms and bathroom, the description of the house/condo.
- c) Also, the listing page will tell users about the neighborhood, statistics of around this area. Users will simply get the demographics info.
- d) The website will show the calculator of the mortgage info for all of the users who want to purchase the property. Users won't overspend their budget.
- e) 3D model view of property is not supported. but the system will show the real 2D picture for this property. It gives users a feeling that they can experience the property without in person.
- f) The website provides a brokerage and salesperson to help users find this property.
- g) The website will show up the right property for users based on their preferences.
- h) The Realtor.ca won't help too much for the seller, but they give a big help for the buyer since they will recommend the similar listings. since some of the property won't last long.

Visual HTA:

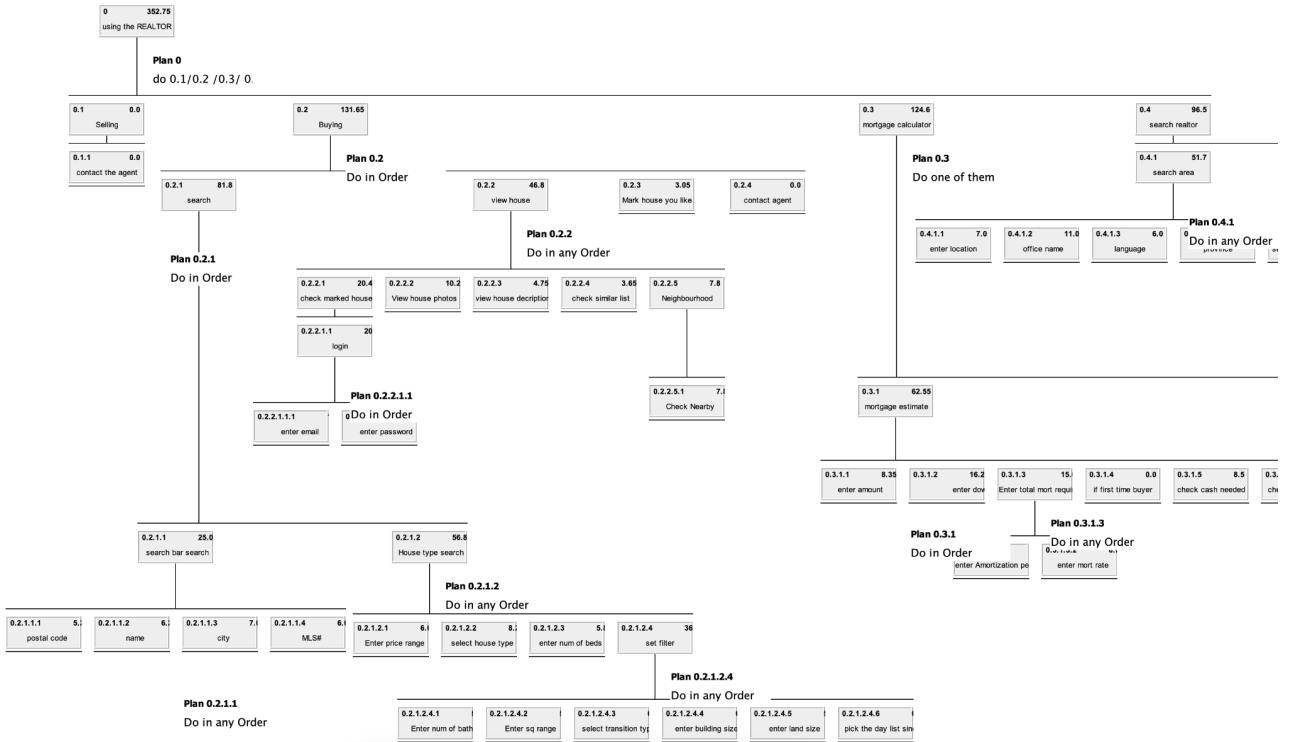


Figure 15: Visual HTA with KLM Realtor.ca, Part 1.

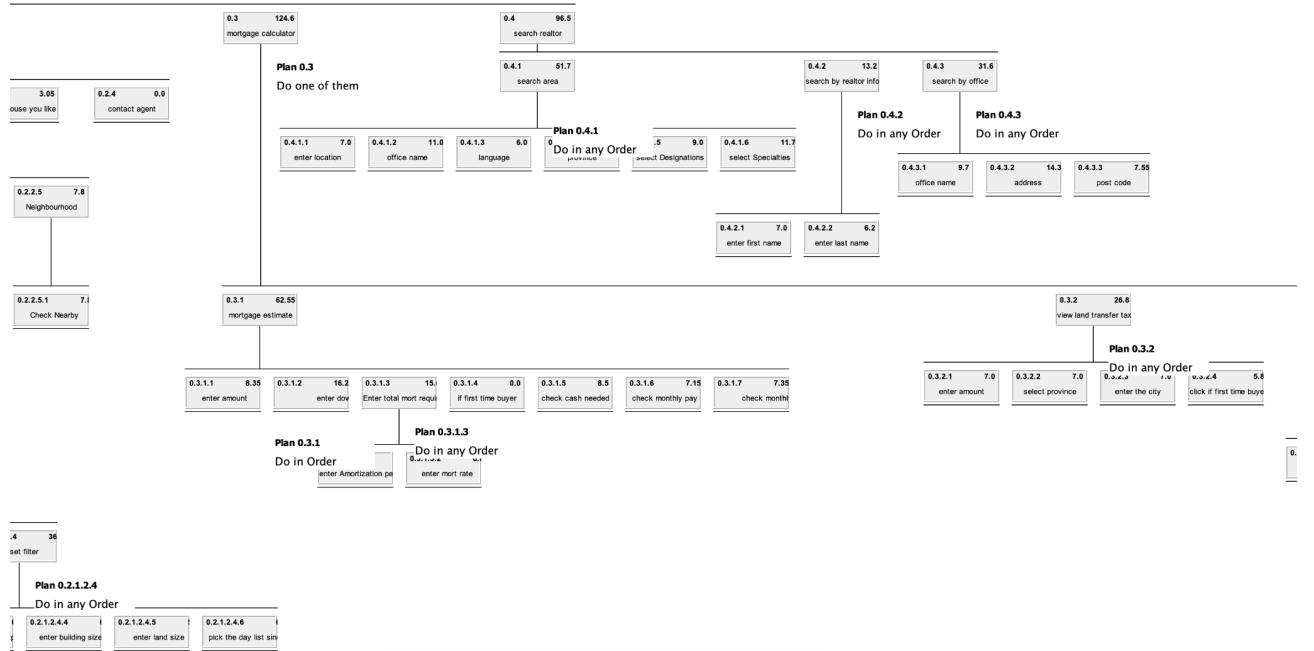


Figure 16: Visual HTA with KLM Realtor.ca, Part 2.

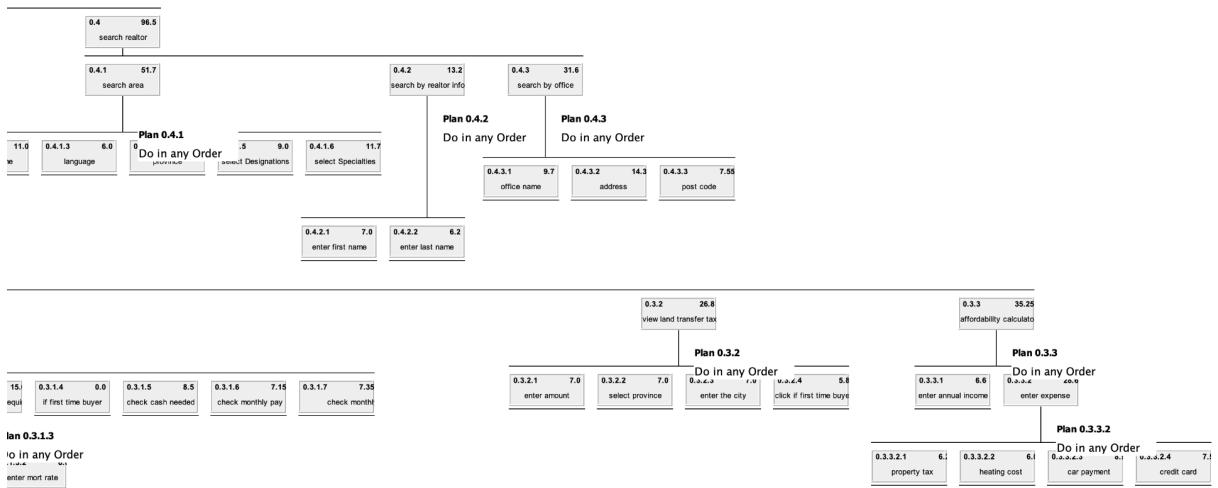


Figure 17: Visual HTA with KLM Realtor.ca, Part 3.

Analyze: zolo.ca

Home page

The screenshot shows the Zolo home page for Niagara. At the top, there is a search bar with the placeholder "Niagara" and a magnifying glass icon. To the right of the search bar are links for "Buy", "Sell", "Blog", "Jobs", and "Sign In". Below the search bar are several filter buttons: "Any Price", "0+ Bed", "Home Type", "More", and "Save Search". To the right of these filters are buttons for "Sort: Recommended" and "Map Search". A banner at the top states "1273 homes for sale in Niagara". Below the banner, there are three property listings:

- Property 1:** A two-story house with a garage. Price: \$1,599,900. Details: 6 bed, 5 bath, 3352 sqft, Built in 2007, 93 Watershore Drive, Stoney Creek, ON. MLS# H4126923.
- Property 2:** A multi-unit residential building. Price: \$499,900. Details: 1 bed, 2 bath, 856 sqft, Built in 2019, 313-257 Millen Road, Stoney Creek, ON. MLS# H4127110.
- Property 3:** A blurred image of a house. Price: \$XXX,XXX. Details: — bed, — bath, — sqft, — Years Old, Lakeshore Road, Wainfleet, ON. MLS# H4127110.

On the right side of the page, there is a sidebar with a "Join or Sign In" button, a link to "See photos & sold data", and a note that "Real estate boards require a verified account". There is also a "For Sale" button, a "3D Tour" button, and a "15 minutes" button.

Figure 18: Home Page, Zolo

This is the zolo.ca home page. This website displays personalized information based on the user preference analyzed by Zolo. For example, a user living in the Niagara Region might get recommended properties at St. Catharines. Therefore, there are some listings of the house for sale below the search bar. On the right top of the page, there is a menu bar: Buy, Sell, Blog, Jobs and so

on. There is a sign in function as well, it is similar to the FairSquire login page.

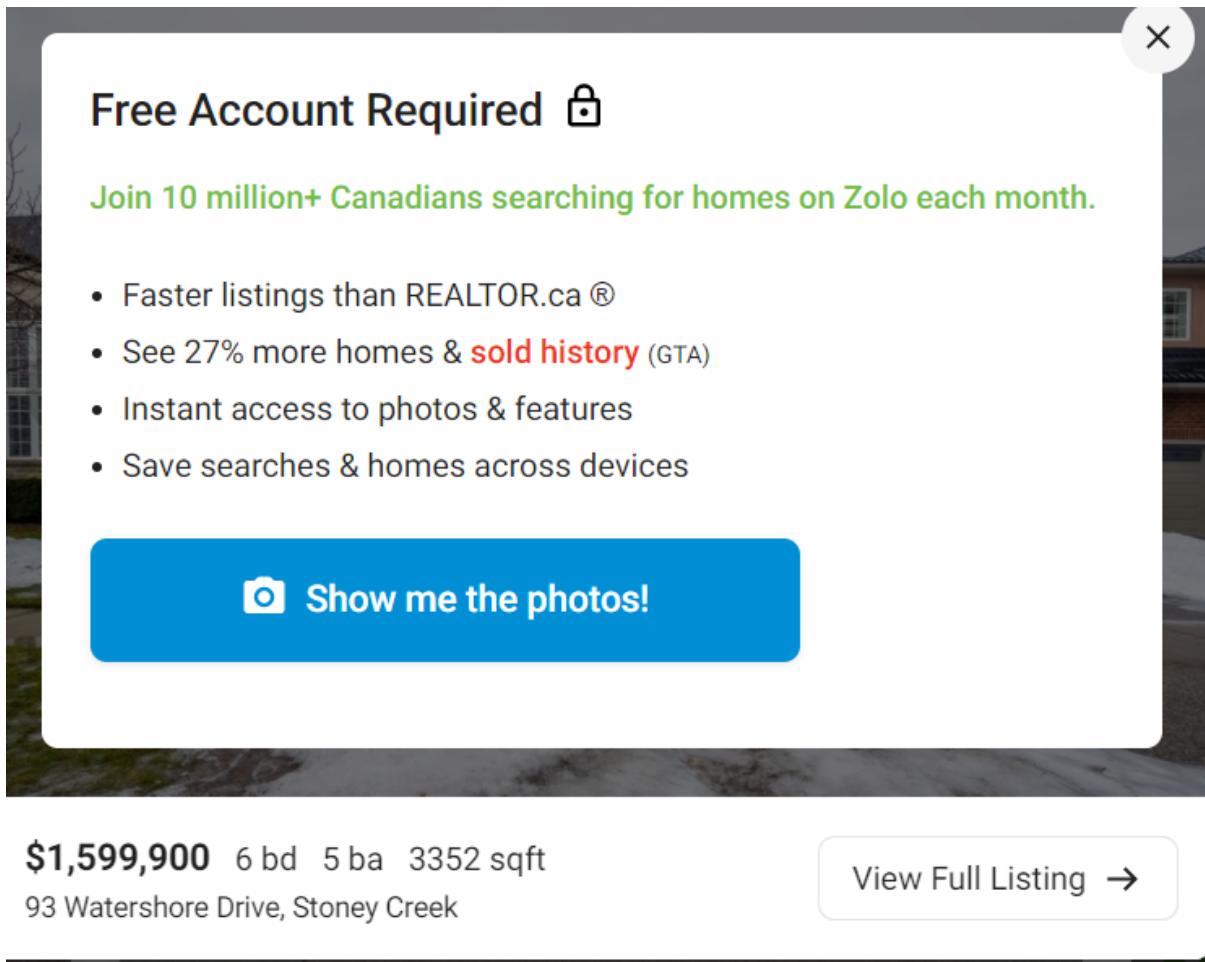


Figure 19: Account Required Reminder, Zolo

After login the account, there are some new functions shown in the picture above.

- a) Mark the house you are interested in.
- b) View more pictures
- c) Retrieve the history price
- d) Get the faster listing and so on.

The search bar with sort features is displayed at the main page as follows.

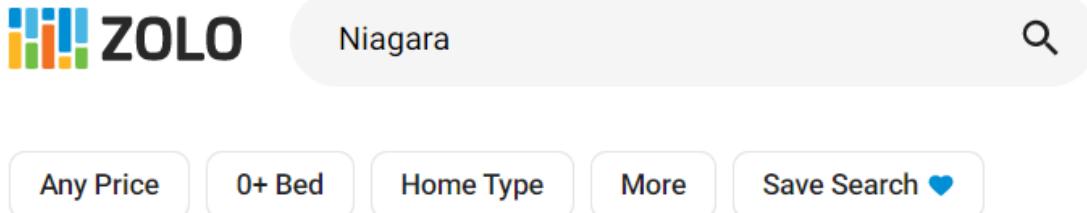


Figure 20: Search Bar with Options, Zolo

Users can sort the price, how many bedrooms, what kinds of the house they are looking for etc.

In the House detail page:

Afford Score™
[What's my score?](#)

Need a Mortgage?
 ON rates as low as **1.20%**

This executive family home is located in the highly desirable 'Community Beach' neighbourhood where it is all about Lakeside Living! Mins from 50 Point Conservation Area & The Edgewater restaurant - there are various ways to take in the gorgeous lake views...including from the front porch of this home. Directly across the street you can take in expansive water views while working in your main floor home office or from either of the two north facing bedrooms on the second level. The second floor balcony may just have the best view in the house! This 3,352sqft home has been finished top to bottom and upgraded with exquisite features like the exposed aggregate driveway and backyard patio, lower level theatre room and games area and new steel roof with lifetime warranty added in 2020. The expansive gourmet kitchen w/island & butler's pantry opens up to the main floor living room with one of the 2 gas fireplaces you'll find in this home. The second level features FIVE (5) spacious bedrooms and THREE (3) ensuite baths which make this home ideal for extended families who need their own space. The lower level features a 5th bedroom and another full bath just incase you need to have overnight guests. With main floor laundry, 2 piece guest bath and formal dining room as well what more could you ask for? If you are looking for a home that is spacious, in a premium location and ready to move in then 93 Watershore Drive is your new home! Offers to be reviewed at 1pm on Tuesday March 1st. (id:4236)

This house/single family home located at 93 Watershore Drive, Stoney Creek is currently for sale and has been available on Zolo.ca for 1 day. This property is listed at \$1,599,900 with an estimated mortgage of \$5,889* per month. It has 6 beds, 5 bathrooms, and is 3,352 square feet. The property was built in 2007. 93 Watershore Drive, Stoney Creek is in [Stoney Creek](#).

Upcoming Open Houses
 We do not have information on any open houses currently scheduled.

Ask About this Home

I would like more information regarding a property at 93 Watershore Drive Stoney Creek

[Go Tour This Home](#)

Property

Transaction Type: For sale
 Property Type: House
 Property Type: Single Family
 Style: 2 Level
 Attachment: Detached
 Size (Interior): 3352 sqft
 Size (Exterior): 3352 sqft
 Year Built: 2007
 Ownership: Freehold
 MLS®#: H4126923

Inside

Bedrooms: 6
 Bedrooms Above Ground: 5
 Bedrooms Below Ground: 1
 Bathrooms: 5
 Half Bathrooms: 1
 Fireplace: False
 Appliances:
 Dishwasher, Dryer, Refrigerator, Stove, Water softener, Washer & Dryer, Range, Blinds, Furniture, Garage door opener

Building

Parking

Parking Space (A): Attached Garage
 Parking Spaces (Total): 4

Utilities

Water: Municipal water

Land

Lot Features:
 Double width or more driveway, Sump Pump, Automatic Garage Door Opener
 Sewer: Municipal sewage system
 Location Description: URBAN
 Size: 50.85 x 104.99 under 1/2 acre
 Acres: false
 Size Irregular: 50.85 x 104.99
 Depth: 104 ft
 Equipment: Water Heater
 Size (Frontage): 50 ft

Additional Media

Video:
https://youriguide.com/93_watershore_dr_stoney_creek_k_on

Bedroom Second level	N/A	8' 7" x 12' 9"
4pc Bathroom Second level	N/A	Measurements not available
Bedroom Second level	N/A	12' 2" x 17' 1"
Bedroom Second level	N/A	12' 2" x 13' 3"
Bedroom Second level	N/A	10" x 16' 2"
4pc Bathroom Second level	N/A	Measurements not available
5pc Ensuite bath Second level	N/A	Measurements not available
Primary Bedroom Second level	N/A	18' 6" x 20' 9"
Bedroom Basement	N/A	12' 8" x 11' 11"
Family room Basement	N/A	12' 11" x 19' 9"
3pc Bathroom Basement	N/A	Measurements not available
Utility room Basement	N/A	Measurements not available
Other	N/A	12' 9" x 23' 6"

Sold History

Listing records and last sold date for 93 Watershore Drive, Stoney Creek

H4126923 Feb 24, 2022 Listed • \$1,599,900

[Join or Sign In](#) • Real estate boards require a verified account to see all photos & sold data

Home Value

Price estimate and comparables near 93 Watershore Drive

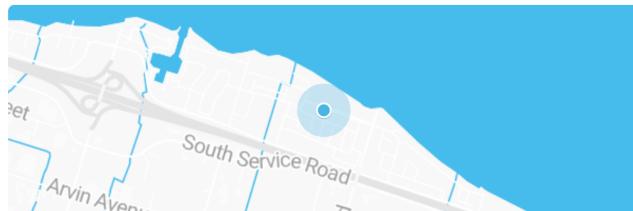
The approximate value of a 6 bedroom 3352 ft² house in the area is:

\$1,583,901

- Schedule a tour immediately.**
Homes like this sell on average in 3 days. There is an 80% chance that this home will be sold within one week of listing.
- Schedule a tour immediately.**
Homes like this sell on average in 3 days. There is an 80% chance that this home will be sold within one week of listing.
- Expect to bid higher.**
9 out of 10 homes like this one have sold over asking.
- You're unlikely to get a deal.**
Only 1 in 100 homes like this sell below 93% of asking.

Neighbourhood

Schools, amenities, travel times, and market trends near 93 Watershore Drive



[Stats](#) [Nearby](#) [Commute](#) [Schools](#)

Ask About this Home

Full Name

Email Address

Phone Number (Mobile)

I would like more information regarding a property at 93 Watershore Drive Stoney Creek

Go Tour This Home

Figure 21-25: Complete Property Listing detail page, Zolo

In the house Detail page:

- a) Users can see the pictures of the house interior and exterior.

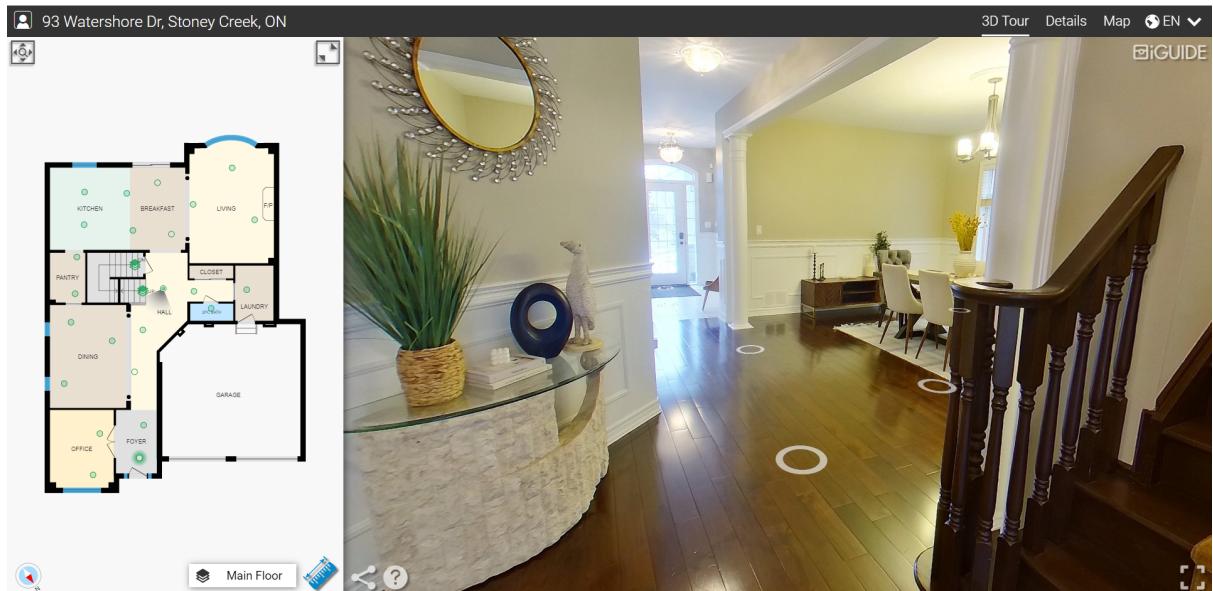


Figure 26, House 360 Interier View, Zolo

- b) Users can see the information about the house including the price, the number of bedrooms and bathroom, the description of the house etc.

93 Watershore Drive
Stoney Creek

\$1,599,900
est. \$6,569 /mo

6 bed 5 bath 3352 sqft
Added 12 minutes ago • For Sale

[Join or Sign In](#) • Real estate boards require a verified account to see all photos & sold data

[Save](#) [Share](#) [View on Map](#) [\\$ Sold History](#)

Type: House/Single Family Added: Feb 24, 2022 (12 mins ago)

Ask About this Home

Full Name

Email Address

Phone Number (Mobile)

I would like more information regarding a property at 93 Watershore Drive Stoney Creek

Figure 27, Viewing Photos Require an Account, Zolo

- c) There is a link for a 3D model of the house. It can really help in this COVID period so that buyers can view the house virtually.
- d) It provides a mortgage option to help buyers to find out how to apply for a mortgage.
- e) If the house has an open date, it will be shown here as well.
- f) After signing in, users can see the price history. It is very helpful for the buyer to make an offer.
- g) Zolo helps users to analyze the approximate value of a similar house, it also helps the buyer to make an offer.
- h) The interior and exterior of the house is not only a consideration for the buyer to purchase the house, the neighborhood also is important for the buyer. Therefore, zolo lists the neighborhood of the house such as schools, hospital, restaurant, Hwy etc.

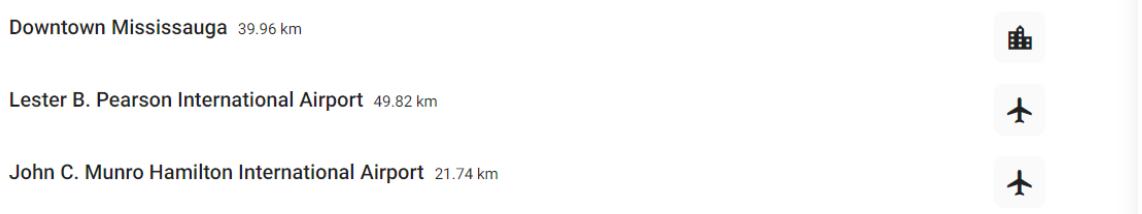


Figure 28-29: Traffic and Transportation Information, Zolo

- i) zolo provides an estimator for calculating the mortgage with the rate. It is very helpful for the buyer to consider their budget and the financial plan.

Winona	6.4
Elementary 2.39 km	
St Clare of Assisi	6.7
Elementary 3.49 km	
St Martin of Tours	9.4
Elementary 5.72 km	
Orchard Park	6.7
Secondary 2.97 km	
Cardinal Newman	7.3
Secondary 5.52 km	

* School ratings provided by School Report Cards by the Fraser Institute (2014)

- j) Zolo also provides a similar house for buyers to choose.
- k) At last, Zolo makes a summary of the house and FAQ questions about the house which the user may be interested in.

For the Sell page:

Potential sellers can enter their house address which they want to sell, and Zolo can help you to estimate the price as a consideration, and it provides an introduction for selling the house with Zolo, which is similar to FairSquare.

How much is my home worth?
Get a free home value estimate immediately.

25

Enter your address

Ex: 123-456 100 Street, Toronto, ON

Figure 30: Sell Page Address Input Box, Zolo

Visual HTA:

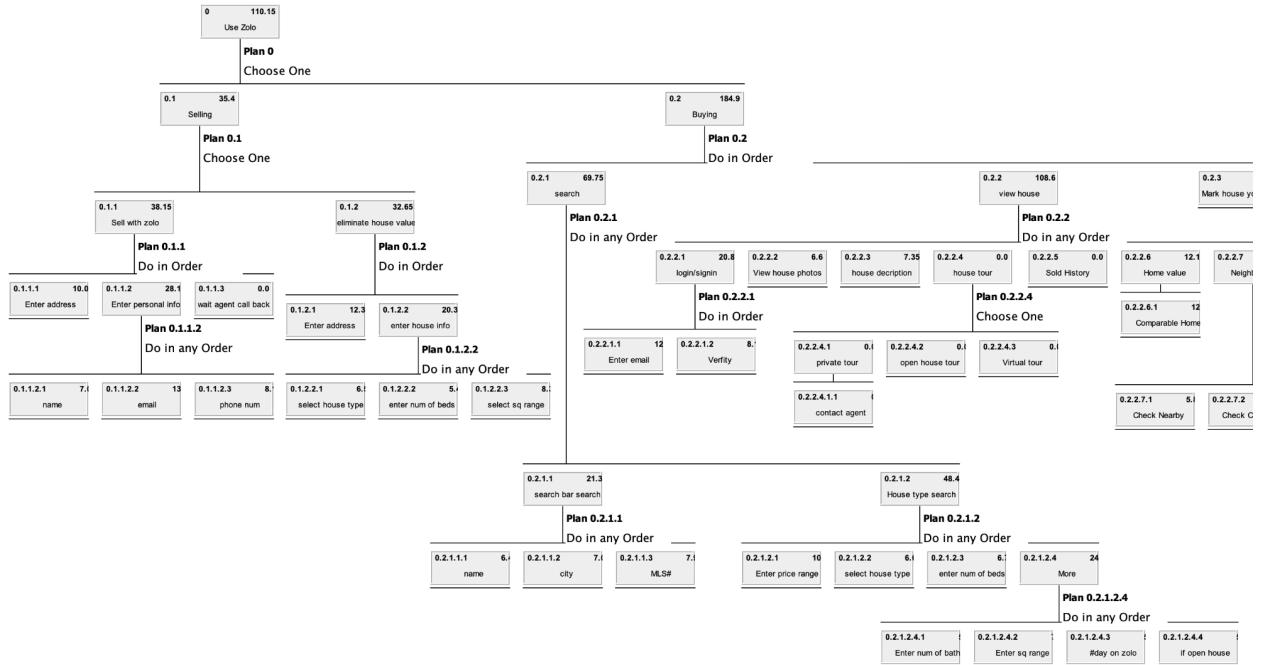


Figure 31: Visual HTA with KLM, Zolo Part 1

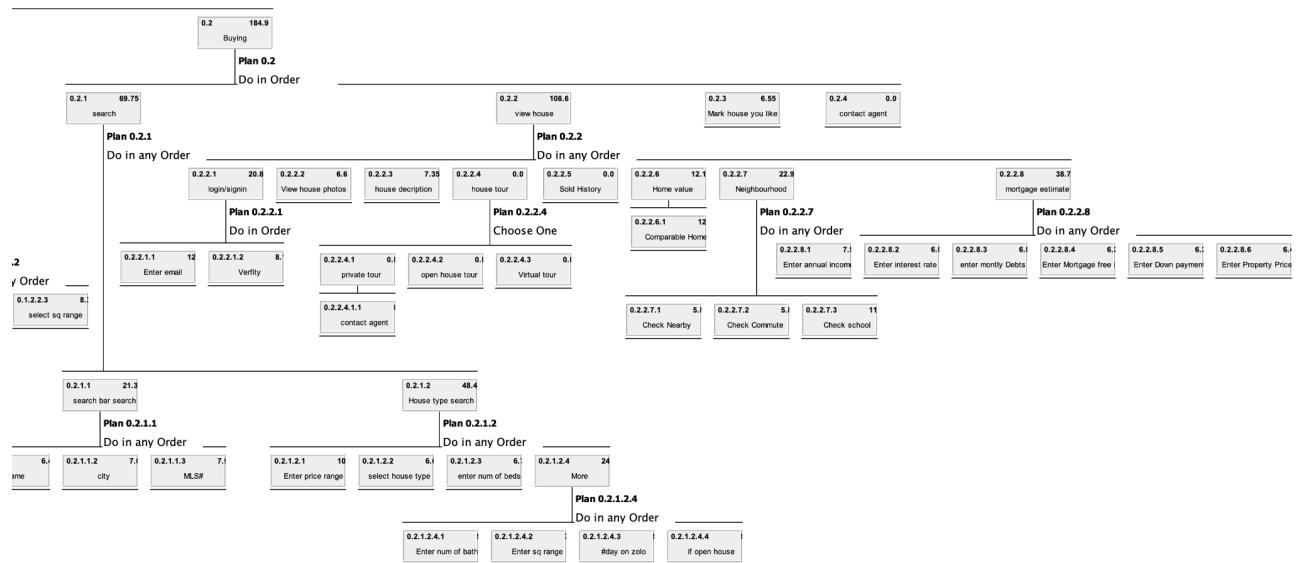


Figure 32: Visual HTA with KLM, Zolo Part 2

Site Comparison:

Similiarities:

1. All three websites provide similar basic features, buy, sell, and search properties.
2. All three websites have a fixed top navigation bar.
3. All three websites have an account registration feature.
4. The search bars of three websites provide various options, such as number of bedrooms, square feet and type of property to allow users to search properties based on their preference.
5. All three websites have a mark function, users can mark the house they are interested in and go back to view anytime.

Differences:

1. Both Realtor and Fairsquare provide an interactive map for users to browse locations of properties. This feature is integrated into the search page, when a user searches a location, the map directly displays all available properties within the searched region.
2. Besides house sell and buy, Zolo and Realtor provide house rental information on their website.

3. Zolo has price history and more financial information for the buyer to consider the price and the offer.
4. Realtor users can search for an agent if they prefer.

Section 3: Site Critiques

Fairsquare:

Fairsquare has key features such as search property listing and viewing, in the property viewing page, buyers are able to fill in contact information then someone will contact back regarding this inquiry. Key advantage of selling on fairsquare is huge savings on commission fee.

Most users who use fairsquare want to save on commission fees when they trade properties. Therefore a user with no experience with real estate and not wanting to work with an agent can go through the process on their website, but this website just provides some basic functions compared to other similar real estate websites which is a deficiency of this website. For example, the search feature of Fairsquare, has very limited options available. There is no filter for separate commercial and residential properties. This resulted in users having to look specifically for commercial/residential properties among all listings which require lots of scrolling and clicking.

Zolo:

Zolo provides services such as property buying, selling and renting. Buyers can also start a mortgage application at their website. When users complete the registration, they will be able to view some exclusive property listings.

One deficiency of Zolo website is it always pops up registration reminders when the user is not logging or not having an account. When a user opens a property listing and wants to view photos, an account required window will pop up, even without account user is still able to proceed to the listing page, but it require user additional time to move their mouse to right down corner to click the “View full listing” button which resulted longer task time.

Realtor:

Realtor.ca is a real estate website operated by Canadian Real Estate Association. They provide services similar to other real estate websites,

Since Realtor is a website operated by CREA, It represents the interest of all realtors and agents, therefore you cannot find any original home owner at this website, all listings are managed by broker or salesperson. Therefore commission fee is unavoidable thus this website is not the optimal option for buyers or sellers who want to save money.

Section 4: Personas

We Created three personas according to our survey results among a total of 28 responses. See appendix A, B and C. We decided that Primary persona is focused on a group of people (especially recent graduate students) who are looking to buy their first property to settle down. These people have very limited knowledge, or no knowledge of real estate.

Our primary persona is mainly focused on people who have just graduated, and these populations are also the majority of our survey. They have no job or recently found an entry-level job. They want to purchase a property to settle down and for the investment following the upward trend of the real estate market.

Our secondary personas are people who currently have a job with a constant income source but do not have much experience with real estate. They like to purchase a condo or house as their first living space to settle down. However, they don't have enough money to achieve their goal. From personal perspective, they will purchase the property in the future when they can afford it. Kevin Li, an automotive salesperson who participated in the survey and we conducted an interview with him, is one of those people.

Section 5: User Demands

Since both primary and secondary user groups have intermediate or higher fluency on technologies based on their gadgets. They do not have much background knowledge of real estate, therefore, the website should be as simple as possible, but have all basic features, such as customizable search, property listing, contact info collection form. For recent graduate students, we can also indicate which houses are more close to big companies on the map, and for people who have an entry level job, we can design a mortgage calculator for them. In General, we will target both of our primary and secondary personas groups by implementing specific features.

Section 6: Interface Presentation

The interface will be presented on a desktop website, the website is cross-platform, which allows users to have a similar experience on devices with different operating systems. In addition to that, the website does not require installation of additional software since almost every operating system has a pre-installed web browser. In addition to all these advantages, the website application is also the project management team's request.

Section 7: Storyboard:

Metaphoric interfaces depend on intuitive connections that users make between visual clues in an interface and the function of the interface. As a result, there is no need to grasp the internal workings of software. Rather than being particular to the automated solution, much of the information was about the user's work routines and aspirations.

Storyboard of Interface:

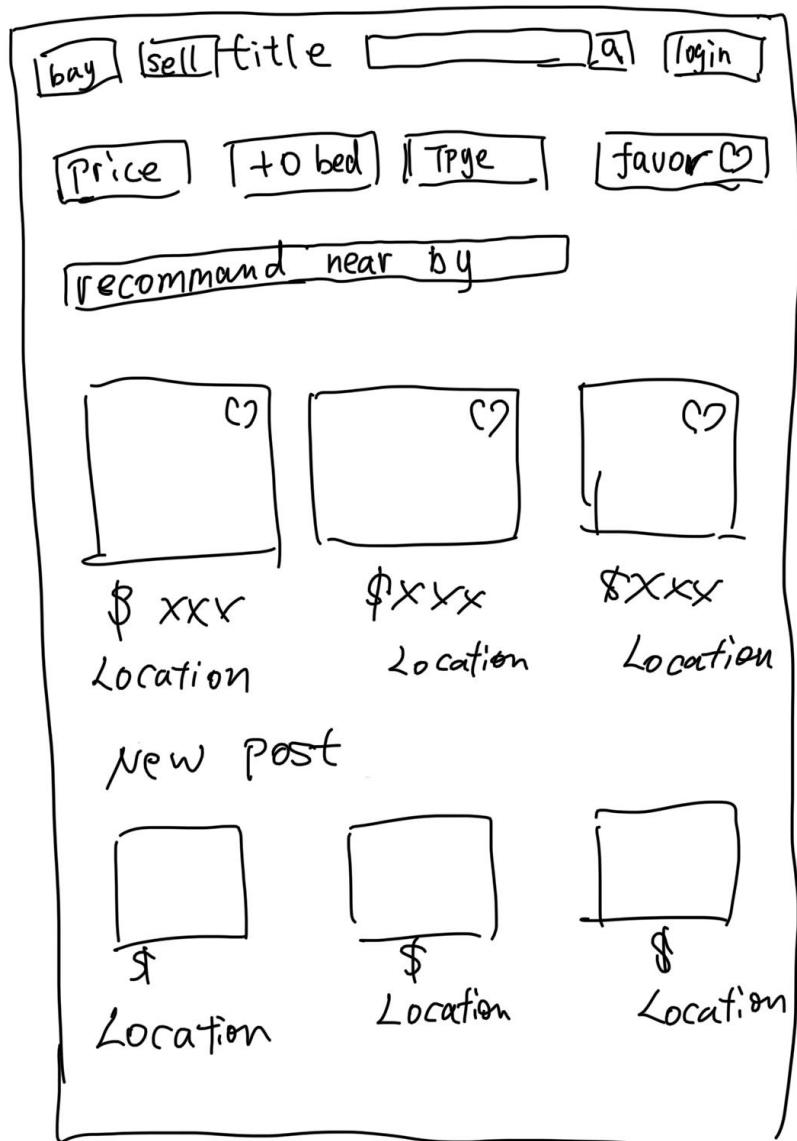


Figure 33: Storyboard of main page.

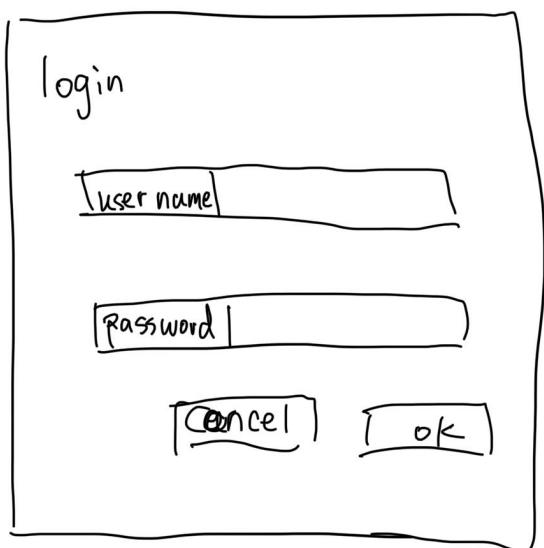


Figure 34: Storyboard of Login page.

Roy Zhu



from current job.

Habits, Behavior, Interests:

Play video games and read news.

Personal Info:

Age 18 to 29, recently graduated student.

Skills:

Proficient in programming, cloud computing and data analytics.

Bio (past and present):

Completed Bsc in Computer Science, currently found an entry level job. Income is at an intermediate level.

Frustrations:

Hate advertising emails. Do not like complex interfaces of websites.

Social:

Spend less than 5 hours per week on Telegram. Most connections are made through undergraduate studies.

Personal Goal:

Learn more about clouding and Artificial Intelligence

Immediate Goal:

Be familiar with the company technical stack to get promotion

Technology:

Super familiar with PC uses.

Kevin Li



Habits, Behavior, Interests:

Make new friends and meet people when cycling around Toronto.

Overwhelming and curious about the world outside. Enjoy playing basketball and snowboard.

Personal Info:

31, Automotive Salesperson, holds a Bachelor's degree in Chemistry and a Master's degree in Business.

Skills:

good at selling cars with professional knowledge about cars.

Bio (past and present):

Came from Nanjing, not had any friends now stay with his girlfriend. Sick of moving and looking for a new place to live in.

Frustrations:

Frustrated when no one comes to purchase a car.

Personal Goals:

purchase a condo.

Social:

maintain contact with university classmates and clients.

Immediate Goals:

Find a property suitable for him.

Technology:

Familiar with mobile phones.

Samuel Jackson



Habits, Behavior, Interests:

Play video game. Enjoy skiing and fishing

Personal Info:

29. a financial consultant in a private high school in Toronto.

Skills:

Skillful at investment and the stock market.

Bio (past and present):

Came from LA in the USA, a MA in accounting and education. Lives with his girlfriend, ready to get married. Intends to invest in real estate.

Frustrations:

House price keeps rising, hard to find an investment house.

Personal Goals:

Earn money from investment and travel the world.

Social:

High school board, friends in Toronto, and family

Immediate Goals:

Get a new Apple Watch.

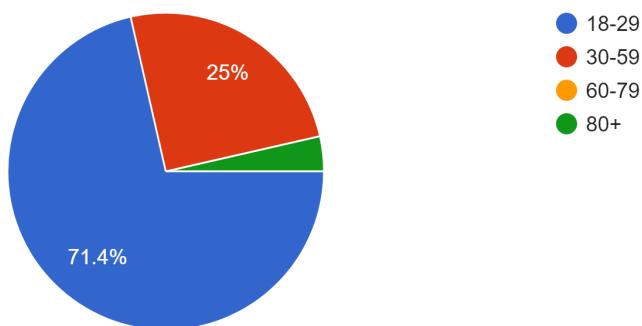
Technology:

Know how to make good use of technology. Show great interests in new Apple products and any latest technology.

Appendix D: Survey Results

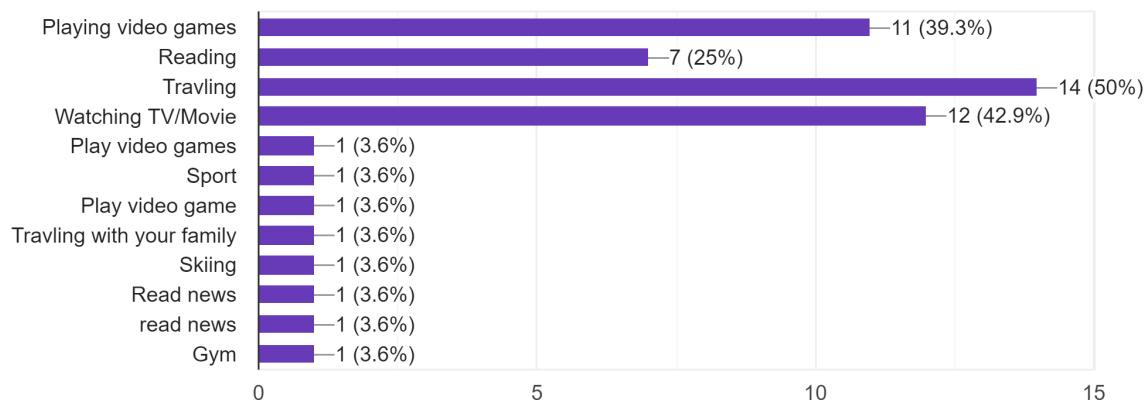
Please indicate your age group.

(28 条回复)



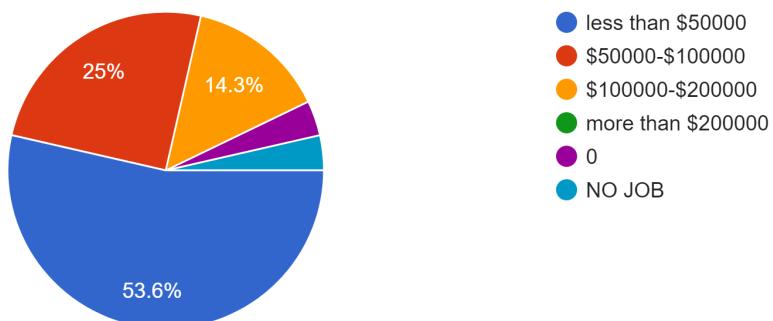
How would you like to spend your free time/holiday?

(28 条回复)



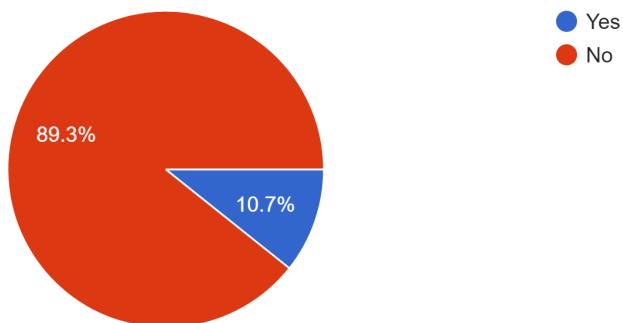
Please indicate your annual income.

(28 条回复)



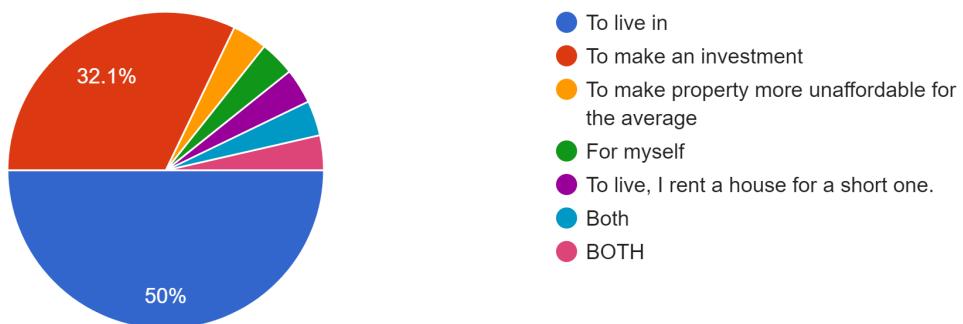
Have you ever purchased a property in Ontario?

(28 条回复)



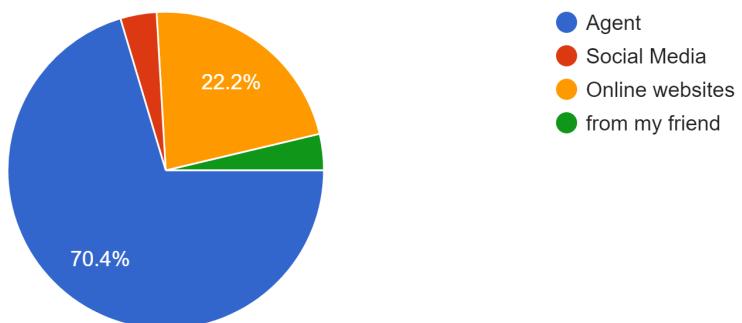
What is your purpose of buying a property?

(28 条回复)



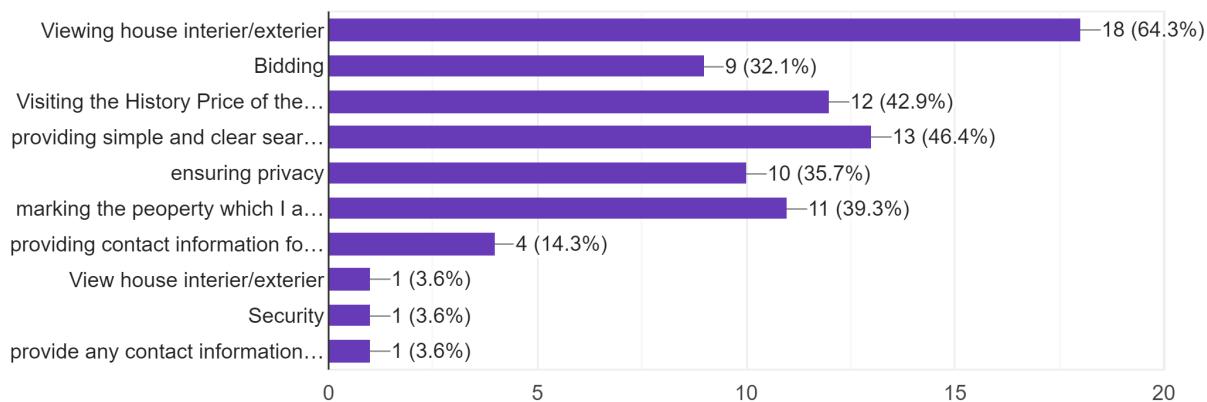
What's the way you prefer to looking for property information

(27 条回复)



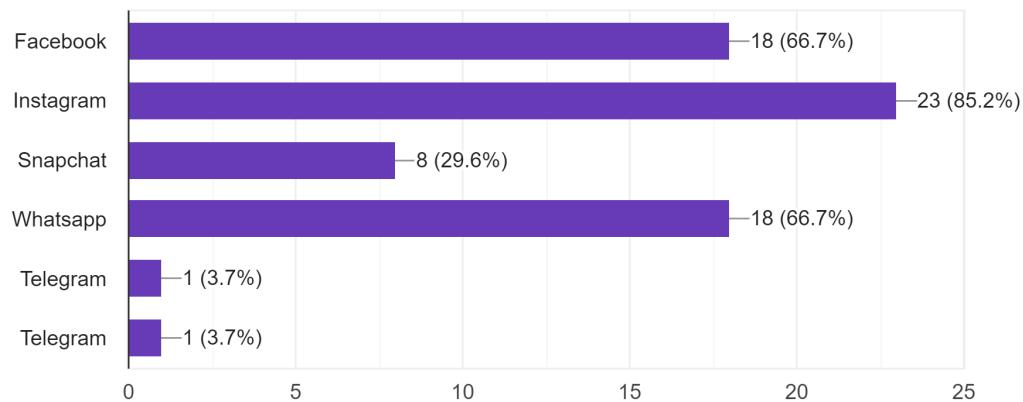
What functionalities do you consider important as real estate website?

(28 条回复)



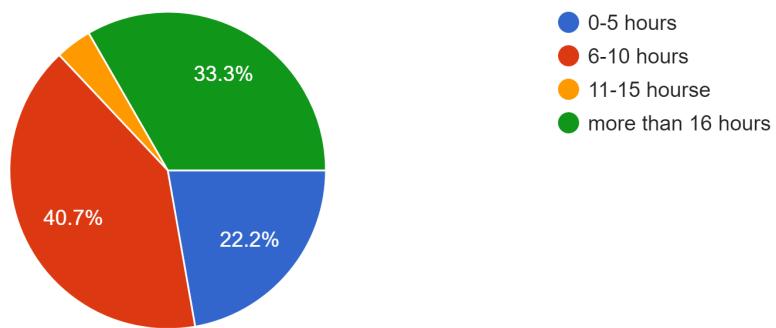
What social media app do you use?

(27 条回复)



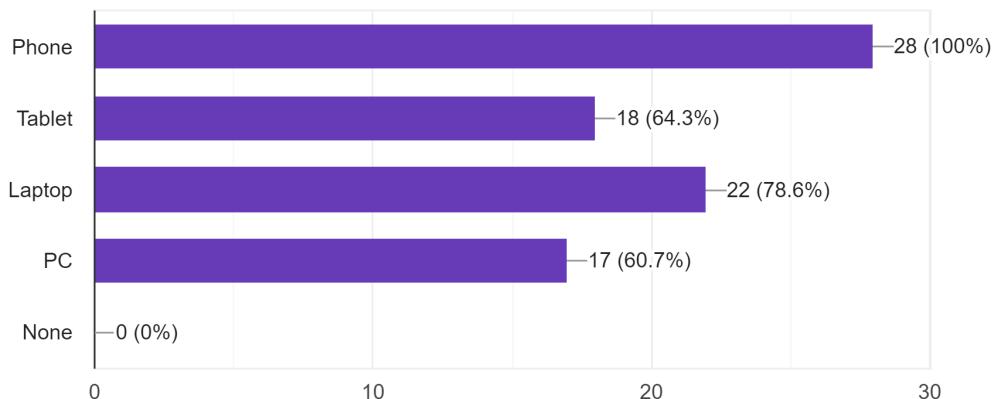
How long did you spend on these social media app each week?

(27 条回复)



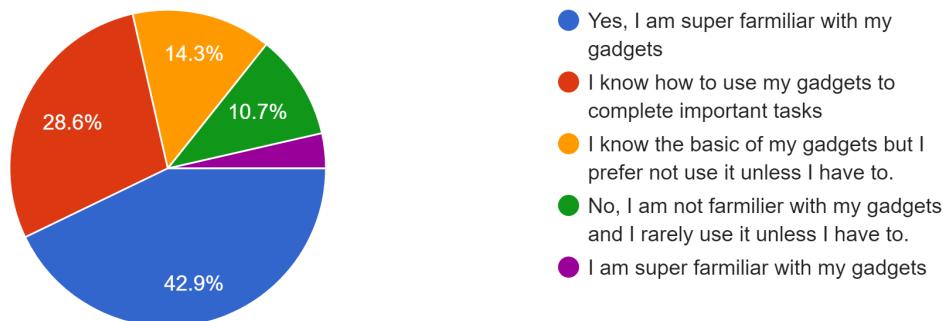
What kind of gadgets do you own?

(28 条回复)



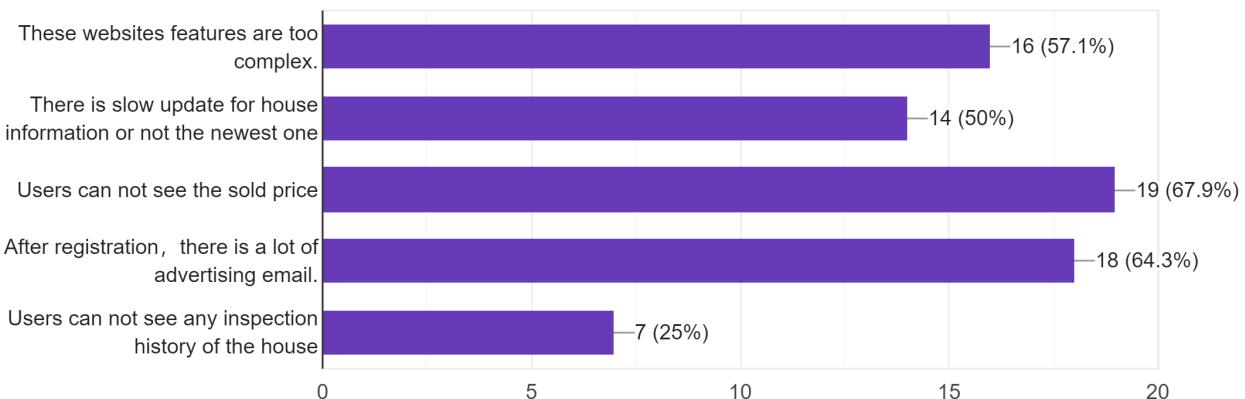
Are you good at the operation of your gadgets?

(28 条回复)



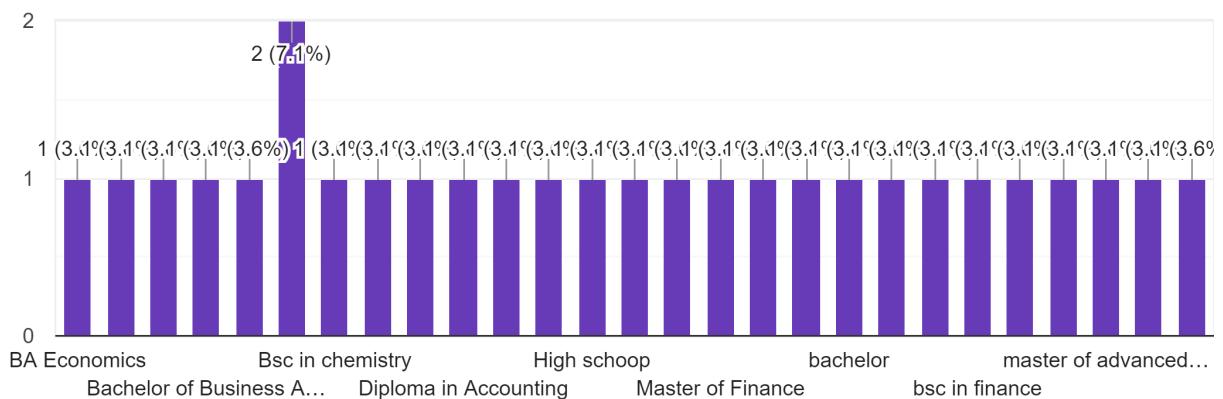
What are the pain points you have experienced when you browsing real estate website?

(28 条回复)



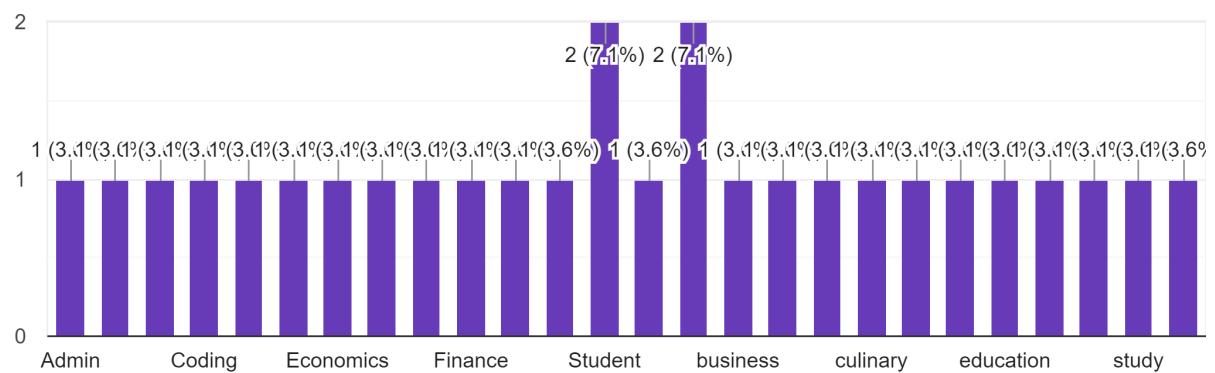
What is you highest achieved educational background? Please also spcify your field of your educational background (eg. Bsc in Computer Science, Med in Child Studies)

(28 条回复)



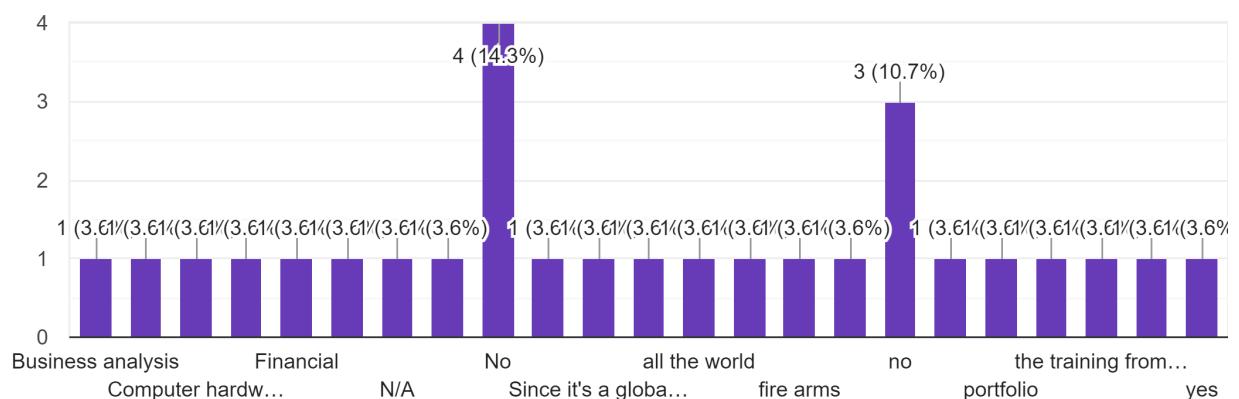
What is your field of work? (eg. Technology, Consulting)

(28 条回复)



Do you have any other particular strength learned outside your field of studies?

(28 条回复)



Appendix E: Links

All Visual HTA file can be downloaded at:

<https://cosc.brocku.ca/~jl17za/HTA.zip>

Survey raw file can be downloaded at:

<http://cosc.brocku.ca/~jl17za/2.xlsx>

Electronic(PDF) version of this report can be downloaded at:

<http://cosc.brocku.ca/~jl17za/1.pdf>