

# **statsHOCKEY – An Interactive Hockey Enthusiast’s Paradise**

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## Previous Experience in JavaScript

Prior to this website development project, I had a small amount of experience in projects using JavaScript. My first exposure to JavaScript was in high school computer science class (Grade 11). My teacher was showing us how to make websites in HTML, each day was an assignment. One day we learned how to implement images, the next we would learn about rows/columns. This continued for HTML and Java all the way until we got a month to work on our final assignment: combining all the html/java that we learned into a website. To do this, we needed to use some JavaScript. This was my first exposure and when my teacher showed me how to implement it, it felt like everything I was making all came together in an interactive way.

My other notable uses of JavaScript were in my very first semester of university, in the main software engineering course, as well as project 1 for this course. While we had smaller assignments littered throughout the course, the main goal of the course was for me and my group to develop a business and create a website for it. The course acted as an introduction to web development in this way, developing our HTML, CSS, and JavaScript skills. By this time, I had forgotten most of what I learned in high school, so I had to re-learn it. I ended up implementing an interactive button for the navbar that contained a dropdown menu. The dropdown menu had all the links to the rest of the pages on the website. It wasn't much, but I was proud of it. Another project I find myself proud of is Project 1 in this course, SEG 3125. I taught myself everything from the ground up and produced a website which received perfect marks, a feat not many students have achieved.

So, with this small amount of experience using JavaScript, as well as the fact that I hadn't practiced using it in a while, I knew I had a lot of learning to do. After designing the core website using Bootstrap, I decided to go to W3Schools to learn some JavaScript implementations. I had always gone to this website for learning the basics of any language, as their 'Try Me' editor always proved useful when I wanted to test things involving the language I was learning at the time. I also consulted a connection of mine who uses JavaScript frequently for his web development job. He says JavaScript is the best language to learn as it blends into many different fields and has use everywhere. For a couple of days, I observed how he used

JavaScript in his websites. The most important thing to my learning was asking him questions, as it helped me tie what he was doing to my project and how I could use the skills he was teaching me.

## How I Chose My Website

When considering a domain to explore, I began evaluating my interests. I wanted to do something a bit different from normal, and something that I felt was underappreciated. I enjoy playing video games, but to me it feels like everyone does. Most guys I've known through high school and even in university all play video games regularly. In the modern era there has been a huge increase in popularity of video games, and a decline in popularity of sports. So, I decided to make a website based around my favourite sport and a serious passion of mine, hockey.

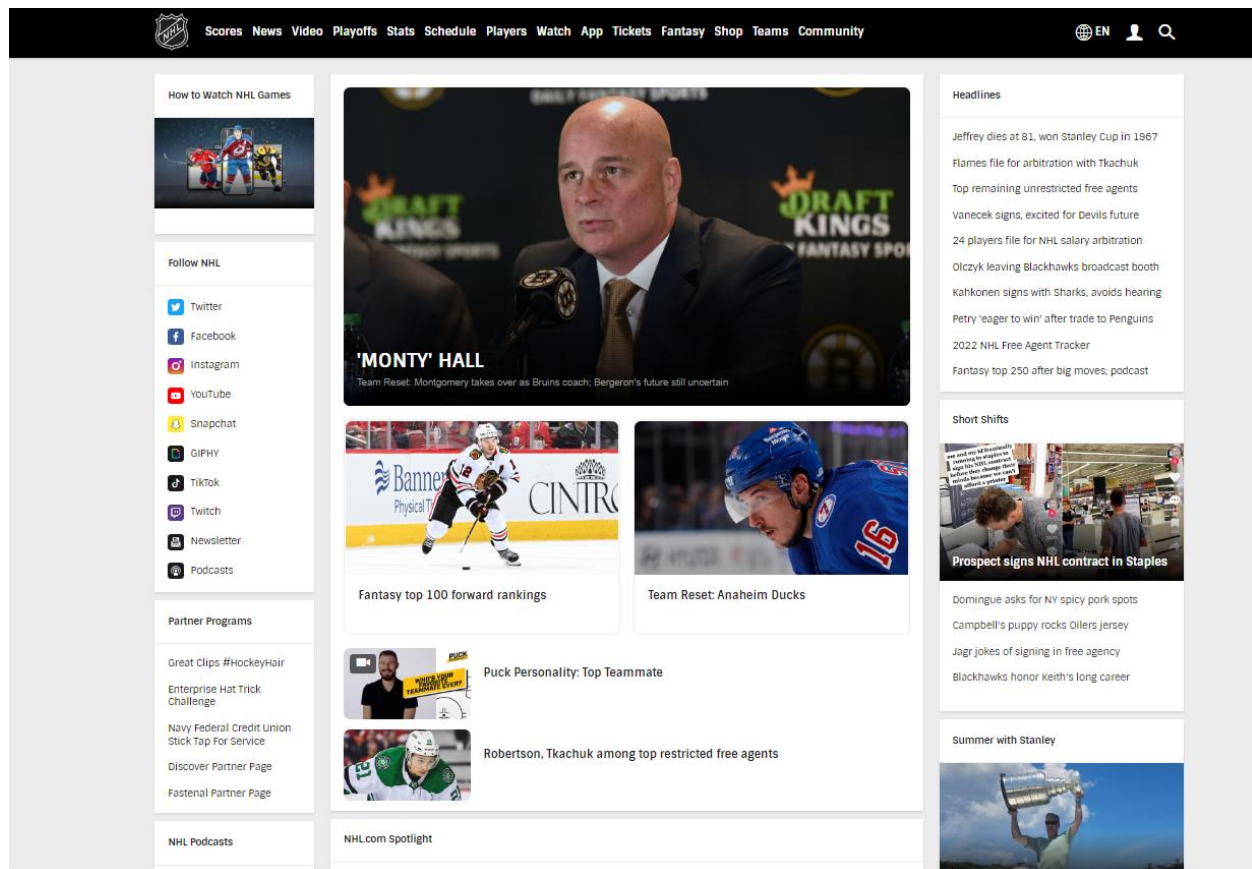
I had a few options on where I could take a hockey website. I could have made a databasing website, which keeps records of all the stats of the players. These are used for analytics purposes, so I could have also opened into more of an analytics side of the website instead of pure database. Another concept was to have my website turn into 'hockey news', publishing many articles on what is current in the hockey world. It would be easy to implement, however I saw a drawback in that there was not a lot to be added to a simple news website. So, I decided to create **statsHOCKEY**, the best of both worlds and the ultimate center for all things hockey!

There are four main pages included on the website, Home, Divisions, Graphs, and Offers. Home contains some main articles and trade information and opens the user into the website. Divisions contains the divisions of the teams and has links/buttons to details for each team. Graphs includes some pre-made graphics of key information in the league such as top performers and teams on a hot streak. Finally, Offers is a simple sign-up page for the user to get e-mails from statsHOCKEY on future promotions and events the website might host.

## Inspiration Websites Consulted

When you think of hockey, you think of the NHL. So, obviously I went there first and looked and what they had to offer. I liked how they had the main, more interesting articles as cards in the middle, and then on the side in another column they had some other, more minor headlines.

<https://www.nhl.com/>



Another website I consulted was TSN, a well-known sports statistics and analytic website that works closely with not only hockey, but other sports as well.

<https://www.tsn.ca/nhl/statistics>

**STATISTICS**

Playoffs All Teams 21-22 Search

**SKATERS**

	GP	G	A	P	+/-	PIM	SOG	S%	GWG	PPG	PPA	SHG	SHA	H	BS	FOW	FOL	FO%	TOI	PPTOI	SHTOI
C. McDavid, C	16	10	23	33	15	10	61	16.39	1	2	6	0	1	51	4	92	83	52.6	23:02	3:47	0.34
L. Draisaitl, LW	16	7	25	32	4	6	44	15.91	1	3	6	1	0	8	3	143	151	48.6	21:22	3:49	0.38
C. Makar, D	20	8	21	29	7	10	71	11.27	1	2	10	1	0	28	43	0	0	-	27:04	3:34	2.34
N. Kucherov, RW	23	8	19	27	7	14	77	10.39	1	6	5	0	0	24	3	0	0	-	20:44	4:24	0.01
M. Rantanen, RW	20	5	20	25	3	4	53	9.43	0	1	11	0	0	36	8	26	36	41.9	20:11	3:37	0.01
M. Zibanejad, C	20	10	14	24	0	4	63	15.87	1	6	5	0	1	21	11	207	199	51.0	20:51	3:01	1.30

We can see they filter by top players and provide them all in a list. I really liked the idea of implementing this concept, but unfortunately it was unfeasible to implement the rosters of all 32 teams like this, as well as create a sorting ascending/descending function for each stat on the table. For my implementation, I stuck to top players points wise for each team of the offense and defence. I also included a small part for the starting goalie of each team.

The final website I consulted was hockey reference, a lesser-known hockey stat website/database that I had used earlier on as a kid to look up how my favourite team was doing. (New York Islanders)

The screenshot displays the Hockey Reference website interface. At the top, there's a navigation bar with links for Sports Reference, Baseball, Football (college), Basketball (college), Hockey, Football, Blog, Stathead, and Widgets. A search bar is prominently featured with the text "Enter Person, Team, Section, etc" and a "Search" button. Below the navigation bar, a secondary menu includes "Players", "Teams", "Seasons", "Leaders", "NHL Scores", "Playoffs", "Stathead", "Newsletter", and "Full Site Menu Below".

The main content area is divided into several sections:

- Every NHL Player:** A grid of player headshots. Below this, there's a "View any Active Player:" section with a "Choose a Team" dropdown and a "Then a player" dropdown, followed by a "Go!" button. Below that is a "Select a Hall of Famer:" section with a "Select a player" dropdown.
- Recent Debut:** A list of recent debut players including Viktor Lotin (OTT), Thomas Hodges (ANA), Beith Walsh (NJD), Hunter Drew (ANA), Evgeny Kochevsky (CAR), and Bokondji Imama (ARI).
- In Memoriam:** A section honoring Senators owner Eugene Melnyk, Rod Zaine, Bryan Marchment, Larry Jeffrey, Jean-Guy Gendron, Jim Paolin, and Jack Gordon.
- Born On This Day:** A list of players born on the same day, including Bill Flett, Len Grosvenor, Kirill Marchenko, Timo Helbling, Lyle Odelein, and Byron Bitz.
- 2021-22 NHL Standings:** A table showing the current season's standings, categorized by division (Atlantic, Metropolitan, Central, Western). The table includes columns for Team, W, L, OTL, PTS, RW, RgRec, and RgPct.
- Stathead:** A section on the right side of the page, featuring the Stathead Hockey logo and the tagline "The Most Powerful Research Tools in Sports." It includes a "Subscribe Now (First Month Free)" button and several interactive tools: "Player Season Finder", "Game Finder", "Player Goal Finder", and "Team Streak Finder". Each tool has a brief description and an example query.

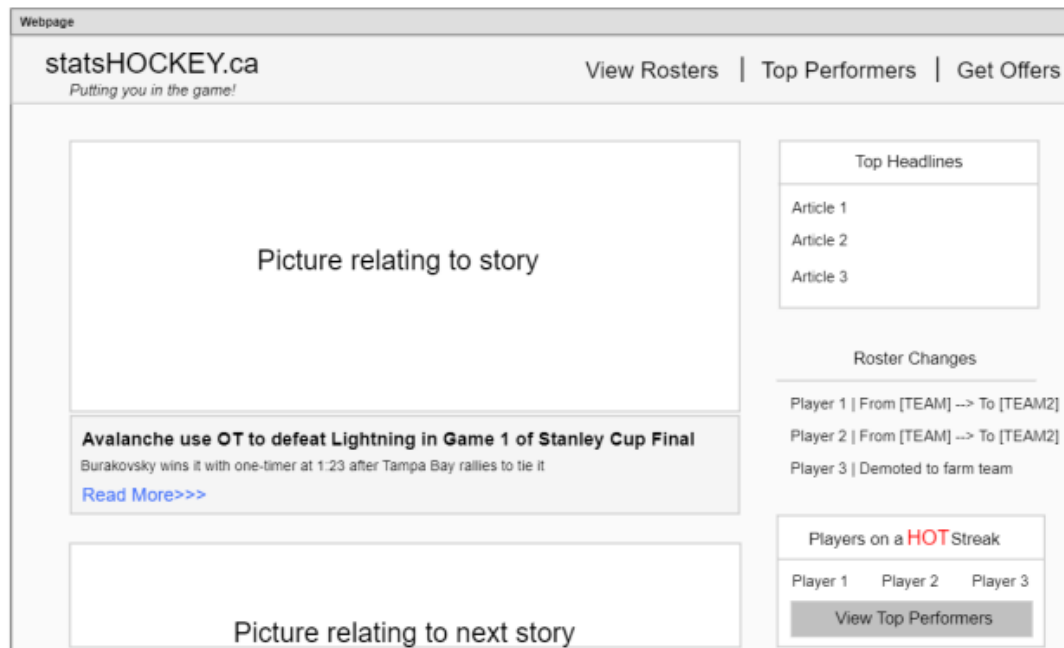
At the bottom of the page, a small note states: "Player pages include basic statistics and links to player's game logs, splits, and more."

While I don't exactly admire their choice of colour scheme, I noticed a trend comparing with the NHL website where they separate their content into columns on their home page. I also liked how they separated teams by their divisions (Atlantic, Pacific, etc) to keep it more organized for knowledgeable hockey fans to sift through, as well as provide a more realistic reflection of the standings.

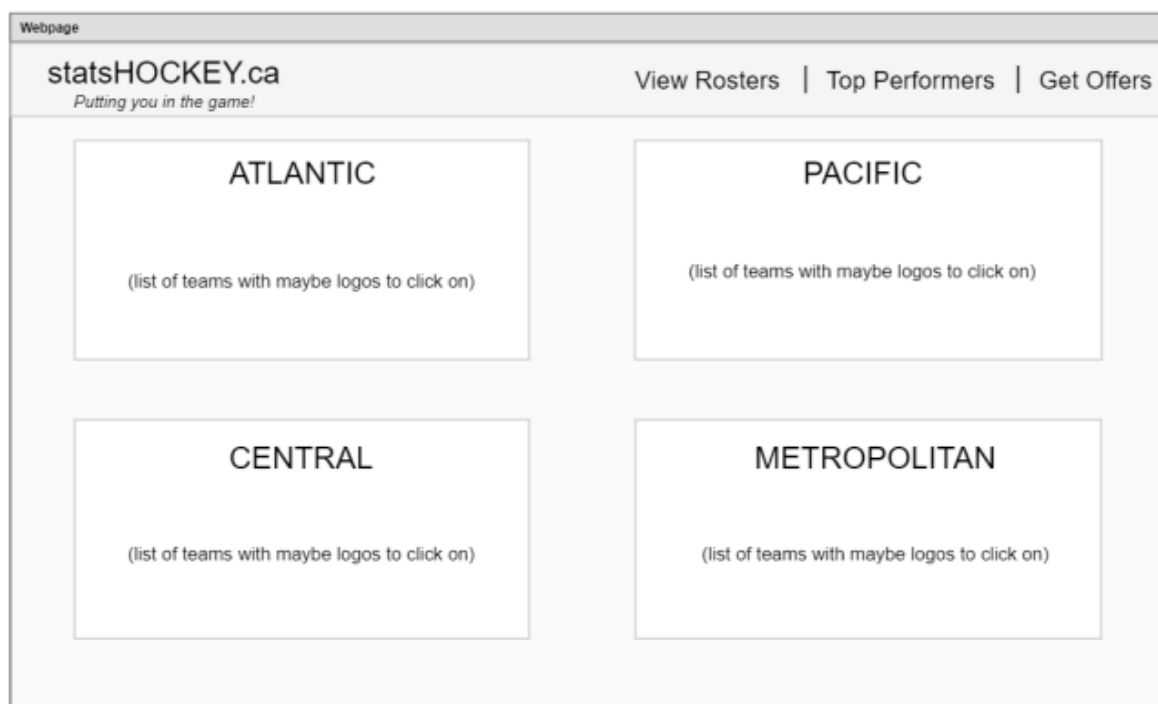
## Original Mock-ups of Website

### Website Design:

#### Main Page

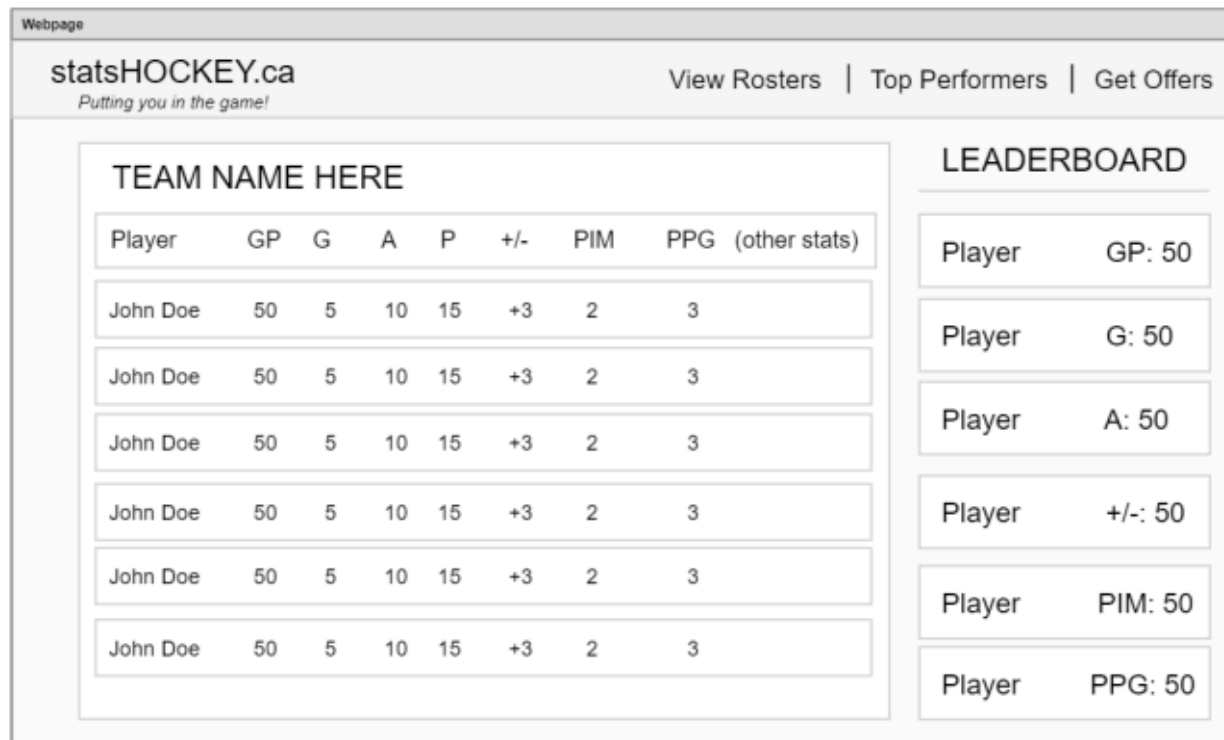


#### View Rosters Page





## Individual rosters



## Top Performers Page



## Get Offers Page

Webpage

statsHOCKEY.ca  
*Putting you in the game!*

[View Rosters](#) | [Top Performers](#) | [Get Offers](#)

### Get future updates and offers on hockey-related activities!

*We have many connections to other useful stats/news websites, as well as other betting/guessing games such as Tim Hortons NHL Hockey Challenge!*

Would you like to be put in the loop, and receive special hockey-related opportunities from us? Sign up!

Name	Email
<input type="text"/>	<input type="text"/>
Date of Birth	Favourite Team
<input type="text"/>	<input type="text"/>
Access to mobile phone?	<input type="text"/>
	<input type="button" value="Sign Up"/>

My initial concept for this website revolved around mostly the navbar. I wanted to have a solid navbar with different buttons to link to all the different pages and keep the website organized. My website, organized in columns, was to be kept simplistic while also maintaining the user's interest.

I also wanted to have the user only focus on one task at a time. If they wanted to simply check out the current roster of a team, they would go to divisions, search for their team, and then view the roster. If they wanted to go towards the analytic side of things and see which players and teams are performing the best, they would go right to the graphs tab from the navbar at the top.

Reflecting on my mock-up, there are quite a few issues. Based on the peer feedback I had received, more than one reviewer told me my website seemed cluttered with information. They suggested I improve with "usage of colours to help show important sections or through the usage of cards" From this, I decided to use cards in one column, right on the main page. The

usage of colours would come from the images on the cards, and then the cards would also keep the site organized with relevant information kept eye-catching.

## Personas Considered

One of the personas created for me that I took consideration for is Bob. Bob was described as passionate, social, and smart. The main point of Bob's entire existence is his desire to view only things he is interested in like his favourite player/team. The main point for this project is to sate Bob's desire!

To streamline users into what they desired, I presented everything on the Divisions page without having to scroll. Every team is pictured on the screen upon loading in the page so that the user can find the team that they want, or their favourite player in one of the teams.

Someone had also given me a persona for P.K. Subban! His main goal was to test his knowledge by performing a hockey-based quiz. Taking P.K. into consideration, I figured I could implement this in the Offers page.

The Offers page is already driven to those who have an above-average enthusiasm level for the game and want to get more involved by signing up for regular e-mails. So, upon signing up successfully the user is provided with a button offering them to take a hockey-based quiz! This would not be an annoyance, as someone looking to sign up normally could overlook the button and move on with their day, but one who is more passionate about the sport and really wants to test their knowledge would be able to access the quiz if desired.


## Second Iteration


I was having troubles hosting my website on a separate repository, and it seemed like nothing I did could work. Out of desperation, I decided to simply continue my work on the current repository. HOWEVER, I did take screenshots of all parts of the website, so I could include them here for your viewing.


The following is my second iteration (javascript draft & heuristic evaluation) of my website:

statsHOCKEY

Home Divisions Graphs Offers

**Avalanche use OT to defeat your mom in Game 1 of Stanley Cup Final**  
Colorado's players were extremely conditioned during this long game.

**Avalanche use OT to defeat your mom in Game 1 of Stanley Cup Final**  
Colorado's players were extremely conditioned during this long game.

**Avalanche use OT to defeat your mom in Game 1 of Stanley Cup Final**  
Colorado's players were extremely conditioned during this long game.

## Top Headlines

Article #1

wenomecha insama tumajar bisaun wifen looof  
eselifter braun wenomecha insama tumajar bisaun  
wifen looof eselifter braun wenomecha insama  
tumajar bisaun wifen looof eselifter braun  
wenomecha insama tumajar bisaun wifen looof  
eselifter braun wenomecha insama tumajar bisaun  
wifen looof eselifter braun wenomecha insama  
tumajar bisaun wifen looof eselifter braun

Article #2

Article #3

## Roster Changes

bozo [pittsburgh] TO [carolina]

pablo [mexico] TO [canada]

your mother [your house] TO [my house]

linear algebra [course] TO [hell]

This is the Home Page of the website.

statsHOCKEY

Home Divisions Graphs Offers

### Atlantic

Below is a list of teams from this division.

Columbus Blue Jackets
Washington Capitals
New Jersey Devils
Philadelphia Flyers
Caroline Hurricanes
New York Islanders
Pittsburgh Penguins
New York Rangers

### Pacific

Below is a list of teams from this division.

Columbus Blue Jackets
Washington Capitals
New Jersey Devils
Philadelphia Flyers
Caroline Hurricanes
New York Islanders
Pittsburgh Penguins
New York Rangers

### Central

Below is a list of teams from this division.

Columbus Blue Jackets
Washington Capitals
New Jersey Devils
Philadelphia Flyers
Caroline Hurricanes
New York Islanders
Pittsburgh Penguins
New York Rangers

### Metropolitan

Below is a list of teams from this division.

Columbus Blue Jackets
Washington Capitals
New Jersey Devils
Philadelphia Flyers
Caroline Hurricanes
New York Islanders
Pittsburgh Penguins
New York Rangers

This is the Divisions Page.



This is the Graphs Page.

statsHOCKEY

Home Divisions Graphs Offers

**Get future updates on hockey-related activities!**

*We have many connections to other useful stats/news websites, as well as other betting/guessing games such as Tim Horton's NHL Hockey Challenge!*

**Would you like to be put into the loop, and receive special hockey-related opportunities from us? Then **sign up!****

**Enter Information Below!**

Name  
Raymond Moreau

Email  
rmore082@uottawa.ca

How Old Are You?  
20

What's Your Favourite Team?  
New York Islanders

Mobile Phone Number  
(705) 297-5268

**Finish Registration!**

This is the Offers Page.

## **Elements to change/replace/implement:**

To begin, the images were not loading properly on the website. I had not been able to successfully sequence them into my page, so my website was looking rather bland. In the final version, I ensured that this key functionality was working.

On the divisions page, the buttons are kind of off-putting and weird. They will be color coded to match the teams they represent in the final product, which can also help for visual clarity with the user.

The graphs page was my most barren but had the basic framework down. Some buttons in a column, all associated with a graph. On the right column would be the loaded graph itself, based on which button was pressed by the user. This page also suffered the same image problems as the home page did.

A modal will be implemented in the final version of the Offers page, which confirms and thanks the user for signing up, and will offer an interactive quiz for the user to partake in.

## **Code for Final Version**

Website: <https://raymondmoreau.github.io/statsHOCKEY/>

Code accessible here: <https://github.com/RaymondMoreau/statsHOCKEY>

PLEASE NOTE: There is a random bug where the images don't load on the home page when first accessing the site via the link. I have no idea how this happens, but it can be fixed by pressing any other navbar button, and then pressing home again. I apologize for this inconsistency.

## **Interactive Processes**

1. Following Instructions – Signup on Offers page by filling out all the required fields, so that you can receive the latest hockey news and updates via e-mail! (not actually)
2. Exploring (Divergent/Convergent) – View the Divisions page and see the divisions that all the NHL teams are categorized in! You can find the division that your favourite team is in and see which teams they play against. (opponents always in same division)

3. Absorb Information – On the Divisions page, click on buttons for teams that you want to explore, and view their top players of each role! Maybe your favourite player had an outstanding performance this season and is featured on the site!
4. Analyze Results – On the Graphs page, explore a bit and click on the different buttons. They all pull up their own unique graphs based on the button you pressed!
5. Absorb information – The home page has 3 collapsibles with different stories in them! Pick the one most interesting to you based on the title, and then click it to read it. It will expand and show you the full story!
6. Exploring (Divergent) – After signing up on the Offers page, you will be offered a button to a third-party website. There, you can take hockey related quizzes to further push your passion for hockey! Go explore the site and try a quiz if you desire!

## Heuristic Evaluation of Website

1. Consistency – Site has a very similar colour palette throughout, making the website feel more or less the same as one traverses through the pages. The navbar is also kept consistent no matter where you go on statsHOCKEY.
2. Familiar Language – On the Home page there is a button with ‘Français?’ written on it for French speakers to recognize and click, translating the page in French. The language was also kept simple, with each button on the navbar being comprised of one word and the button on offers being written as ‘Finish Registration!’ so it is as clear as possible. Some of the input titles are a bit more ‘human’ and are posed as questions. Ex. What’s Your Favourite Team?
3. Simple, Aesthetic, and Functional Design – The colour scheme used on the website is a basic one, employing duller colours to enhance any colour in images or buttons put on the website. This captivates the user’s attention and doesn’t overwhelm their senses while navigating the website.
4. Freedom and Control – Back to Home buttons are included on the pages of every individual team listed on the Divisions page. The navbar is also kept consistently at the

top of every page so that the user can always use it as an 'escape button' if they were to get lost.

5. Flexibility and Efficiency of Use – Many entry points to the website for different users. French speakers are presented with a Français? button to translate the site for them, those interested in the analytics side of hockey can go to Graphs off the navbar, and those more interested in teams and individual players can access that information via the divisions page.
6. Recognition over Recall – The cognitive load is very limited on every page. The home page has a variety of articles, but the user is not overwhelmed with too many headlines to count. The divisions page presents all 32 teams, neatly organized by division, and color-coded to match the teams' jerseys. The graphs page is very simple, only presenting the user with one graph to analyze at a time. Finally, the offers page is simply a form that the user fills, with a minimal number of inputs required.
7. Clear status – The response time for the Modal on the Offers page is nearly instantaneous, preventing the user from having to wait for their confirmation. Navigation through the pages is done extremely quickly as well, with virtually zero load time due to the pages simplistic designs.
8. Error Prevention – On the Offers page, some of the inputs are asked as a question, to make the site more human and user-friendly. However, this can be confusing to some users, so there is sample filler text which disappears when clicked on, reminding the user of what to input in a more simple and subtle way.
9. Error Recuperation – If the user accidentally navigates on to the wrong page and gets lost somewhere in the depths of the Divisions pages, maybe on a random team, there is not only the navbar there to guide them away from where they currently are, but at the bottom of the page there is also a button reading 'Back to Home' which can bring the user back to the home page should their navigation become troubled.
10. Help – Without the small section of text above the form on the Offers page, the user might not know what they are signing up for and can be hesitant about it, even if it



seems like something they might want. This text helps teach them what they can expect when they signup for the service.

## Appendix 1 – Personas Contributions

The following are personas I provided to my peers, which helped them construct their websites and consider a variety of visitors that might try to use their website.

Persona 1:

Name: Vance (51M)

Intrinsic Characteristics:

-Low Attention Span

-Curious about coffee, can have interest sparked easily with stimulus

-Wants to be in control, likes navigating website on his own to find relevant content

Vance is looking to impress his wife, by making her a coffee that rivals Starbucks in the morning before she goes to work. He woke up an hour before she did just for this. He needs to get an excellent recipe fast. He doesn't have anything particularly in mind, but he knows she likes espressos. He can easily be swayed by something he sees on the website and is trying to be as efficient as possible.

A tool not provided for Vance by your website in its current state is navigation. How can he quickly summarize what content is on the website and decide what is relevant for him? A navbar. It will present him with the section titles that appropriately sum up the content they contain, and then he can make a choice where to go to find the recipe he needs.

Divergent/Convergent exploration is fast here, and extremely crucial to be done fast so he can save time to make his wife's morning beverage.

Persona 2:

Name: Rafa (34F)

Intrinsic Characteristics:

- Low attention span, will move on from a topic if too much text
- Recognizes visuals, can have attention easily brought to images
- Likes creating competition between items to purchase (terms of \$ and another things)

Rafa is going to be searching to rent a guitar for her boyfriend, who plays in a band. He told her any Stratocaster would work, but she has a budget she does not want to surpass. She will need to be presented with tools to filter her search and then compare the prices of results.

Something the website does not currently have is specific search functions for each instrument. It will be hard for her to search for ONLY Stratocasters, like her significant other wants. Maybe after selecting one subcategory, it gives smaller options for smaller subcategories of each instrument! This will aid the Divergent/Convergent exploration of users looking for a specific product.

Persona 3:

Name: Simone (23F)

Intrinsic Characteristics:

- Secondary user of website (from friends' computer)
- Not tech savvy
- Unaware about computers

Simone is not well versed in computers but knows that she needs a high performance one for her new job, game testing! She is currently with her friend who is more computer savvy on their computer navigating the website looking for parts.

Simone has no clue which parts do what, and what is needed to build a PC. Including an education section would be a wise move because it will teach inexperienced users what the website is about, using the Following Along interactive process.

## Appendix 2 – Heuristic Evaluations

### **Website 1:**

#### **Heuristic 5 - Flexibility and Efficiency of Use**

Perhaps on the individual teams' pages, you can include a 'similar teams' section, where you recommend some related teams for the user to explore after they are done with their current teams' page.

This section would probably be easier to fill out if the sign-up page was implemented, but my suggestions for that is to make sure you have a checker to see whether the user is implementing info in the correct way (phone number, email, etc.)

#### **Heuristic 6 - Recognition over Recall**

Great management of user short term memory does not require them to remember anything. Presents every path that a user may be interested in with the top bar and brings them through the website properly to articles and teams that may spark their interest. The top bar does this with few items as well, to not distract or overload the user.

However, it does get a bit choppy by the end of the page with the big articles. I understand they're meant to be on their own page, but if they are on their own page as is, maybe group the information in paragraphs, mess with fonts and alignment to make the article engaging for the user to read.

### **Website 2:**

#### **Heuristic 1 - Consistency**

Liking the consistency of your top bar through all the pages, and how the button turns white to indicate which page the user is on.

Signing up for a lesson is cool because you have a working bar showing progress into signing up for the lesson. This allows the user to track where they are at and makes them feel like each step is more meaningful.

Aesthetically the site could use a bit of an overhaul, and I suggest adding a tertiary colour to your palette of the standard green/white you used. It could make the website give a warmer feel if you used a light green in the background of some parts

### **Heuristic 10 – Help**

Adding larger buttons with questions on them can help guide users around your website. For example, if you were to include a large button with the text: "Looking to book an appointment with an instructor? Click me to get started!" would easily guide a user to the section they want to go in.

Including an FAQ about your service is never a bad thing. You could include it at the bottom of your home page maybe, right before the contact us section.

### **Website 3:**

#### **Heuristic 4 - Freedom and Control**

I feel like I have a lot of freedom exploring this website. Anytime I go too far into something, or I maybe end up on a page unhelpful to me as a user, I can always reset using the top bar.

There are also many buttons on the individual pages that link to potentially relevant pages as well, allowing the user to discover at their own pace.

Only complaint is, when I submit my Help/Contact Us form, it brings me to a confirmation page of booking, which doesn't seem appropriate. Try a different confirmation page, maybe just one sentence saying 'thank you for reaching out, we will get back to you as soon as we possibly can' or something or the sort.

#### **Heuristic 7 - Clear Status**

This is going to be the section with the most glaring issues to fix.

After registering an account, a user is brought to the login page with no context. You should decide whether they are simply logged in after registering, or if you are going to give them a confirmation on the creation of their account, and then provide a login option.

Upon appointment booking, there is a confirmation page. That is great, however you need to change up your button choice. One should not have to hit confirm after receiving a message saying, 'your appointment has been booked ... we will contact you shortly', and there shouldn't even be a button labelled 'Back' as if someone can just take this back by pressing it. Instead include only one button labelled 'Ok' or something of the sort.