**Technical Writing**

Gareth Craig – L00129014

05/10/2022

**Topic & Motivation:**

For years now we have been exposed to the handiness of next day delivery, item comparison and promo codes as we shop online. Not only can we order and pay in for items online, but we can also get food, shopping or takeaways delivered to our door.

In a world where we are growing more accustomed to opening amazon and ordering items as opposed to checking if our local stores even sell these items, is it feasible for a small business to create a professional quality e-commerce website while managing a busy retail store?

During Covid most of us were of work, while sitting indoors, regardless of our technical know-how we moved our interest to online shopping as all non-essential shopping was forbidden. I was fortunate enough to have been offered a job to create an online e-commerce website for a local bicycle store. As we all do, I checked their current website to see what the expectations where. Well safe to say, the bar was low. With a tedious navigation bar, mismatched image ratios, missing item descriptions and out of stock items that I was still able to order, this site was obviously left to the side for quite some time.

Was this due to the fact that retail was booming before Covid and they had no time to manage it? This got me thinking, would it be possible for a store during the midst of Covid to setup a truly good e-commerce store. A store that held thousands of items, fully unique item descriptions with the manufacturers item data, not some manually typed version that was missing half the data that was deemed “unnecessary”. A real, top of line website.

As I got started to work on the website I was also in-store managing new stock and getting photos. It quickly became apparent how busy this store during Covid was. Bicycles were deemed essential for travel therefore the retail store was open. As I watched my manager do his day-to-day tasks, I thought about all the small stores that hadn’t the budget to bring a web developer in and create a website. How would they manage in setting up API’s if they were even lucky enough to work with brands that offered API access. The only other solution would be to web scrape data from the manufacturer and display that information.

Because of my above reasons, this is why I am interested in seeing if I believe it would be achievable for a business owner to produce their own professional website while managing a busy retail store.

**Topic:** E-Commerce

**Research Question:** Is it feasible for store owners to single handedly produce a professional e-commerce website to match the current standard people expect.

**Thesis:** I believe that due to the complexity and professional expectations of online shopping that a single business owner could not produce a suitable e-commerce website while managing a retail store.

1. Exponential growth.
2. Soft and hard skills required.
3. Competing against larger brands with qualified professionals.

**Resources:**

The primary resource that I have decided to use for my research question is The Full Stack Developer by Chris Northwood. The secondary and supporting resources are a variation of statistics gathered from various tech sites and online articles/blogs.

(‘20 Biggest Ecommerce Challenges In 2022 + Simple Solutions’ 2022)

(Ravishankar 2021)

(‘Retail sales, Great Britain: March 2020’ 2020)

(Northwood n.d.)

(2017)

(2021)

**Feedback Changes:**

Having received feedback on my initial submission I have went ahead and added more research in to the topic of my choice. I have also found a reliable and trustworthy primary source to base what can be described as core skills and principles required to be a successful web developer in the current era of web development.

**Proving Thesis:**

In order to prove my thesis, I am going to lay out a list of essential soft and hard skills required to be a web developer and also the specific challenges that are faced when creating an ecommerce shop that is expected to meet the high standards set by the Covid-19 pandemic and large-scale brands. Listed below are examples of the standards that are to be meet when providing an online experience to a web user.

1. Users expect a personal, unique experience that has been thought out and tailor designed to suit their expectations. To achieve this standard of professionalism, a well thought out and planned website that accounts for multiple devices is required.  
     
   **Evidence:** Due to the increase in online shopping because of Covid-19, shoppers now expect their online experiences to be significantly easier and simpler to use.  
     
   “68% of consumers say they have higher expectations for businesses digital capabilities since Covid-19.” – (‘Website Design Industry Statistics’ 2022a)  
     
   “Design has a 75% influence on a websites credibility.” – (‘Website Statistics: 60+ Website Stats to Know’ 2022)  
     
   “About 92.4% of internet users prefer using their phones” – (‘Website Design Industry Statistics’ 2022b)
2. A professional website must include custom content such as graphics and videos that have been designed to pull the user in and retain their focus for as long as necessary. Customers will judge a website upon its first appearance, so custom content is there to keep them interested in the website’s products.  
     
   **Evidence:** “Users spend an average of 0.05 seconds deciding whether to stay on your site or leave.”- (‘Website Design Industry Statistics’ 2022c)  
     
   “When you switch to a video background, there is a 138% improvement in conversion rate.” – (‘Website Design Industry Statistics’ 2022d)
3. To keep up with such demand for high quality content, a full stack web developer must possess hard skills such as being able to use Adobe XD for planning/prototyping, Adobe Illustrator for graphics, Adobe Photoshop, or GIMP for image processing (product images) and Adobe After Effects for motion videos.  
     
   **Evidence:** “78% of shoppers want e-commerce sites to include more images on their product pages” – (‘Website Design Industry Statistics’ 2022e)  
     
   Indeed.com lists that the average completion for a computing science degree could set you back either 3 years if your full-time, or 5 years if your part time. Some of the skills acquired from these courses are languages such as HTML, CSS, JavaScript, and software skills such as Adobe creative suit.  
     
   From looking at other various universities around Ireland, it is clear that the time frame for the above completion time is similar no matter that location that the course is taken.

# Bibliography

20 Biggest Ecommerce Challenges In 2022 + Simple Solutions [online] (2022) *Vue.ai*, available: https://vue.ai/blog/ai-in-retail/ecommerce-challenges-in-2021/.

Gajic, A. (2022) UX Statistics [online], *Truelist*, available: https://truelist.co/blog/ux-statistics/#:~:text=70%25%20of%20online%20businesses%20fall%20through%20because%20of%20bad%20UX.,-If%20we%20didn&text=User%20experience%20statistics%20show%20that%20as%20many%20as%2070%25%20of,(Uxeria) [accessed 10 Nov 2022].

GuruFocus (2017) UK Online Shopping and E-Commerce Statistics for 2017 [online], *Nasdaq*, available: https://www.nasdaq.com/articles/uk-online-shopping-and-e-commerce-statistics-2017-2017-03-14.

Indeed Editorial Team (2021) What Is a Computer Science Degree? (With Skills and Careers) [online], *Indeed*, available: https://uk.indeed.com/career-advice/career-development/computer-science-degree.

Northwood, C. (n.d.) *The Full Stack Developer*, 1st ed, Apress Berkeley, CA.

Ravishankar, S. (2021) Retail Personalization in 2022: The Ultimate Guide [online], *Vue.ai*, available: https://vue.ai/blog/vuecommerce/retail-personalization-in-2021/.

Retail Sales, Great Britain: March 2020 [online] (2020) *Office for National Statistics*, available: https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/march2020.

Website Design Industry Statistics [online] (2022a) *TechJury*, available: https://techjury.net/blog/website-design-industry-statistics/#:~:text=68%25%20of%20consumers,(Source%3A%20Salesforce) [accessed 10 Nov 2022].

Website Design Industry Statistics [online] (2022b) *TechJury*, available: https://techjury.net/blog/website-design-industry-statistics/#:~:text=About%2092.4%25%20of%20internet%20users%20prefer%20using%20their%20phones. [accessed 10 Nov 2022].

Website Design Industry Statistics [online] (2022c) *TechJury*, available: https://techjury.net/blog/website-design-industry-statistics/#:~:text=Users%20spend%20an%20average%20of%200.05%20seconds%20on%20deciding%20whether%20to%20stay%20on%20your%20site%20or%20leave. [accessed 10 Nov 2022].

Website Design Industry Statistics [online] (2022d) *TechJury*, available: https://techjury.net/blog/website-design-industry-statistics/#:~:text=When%20you%20switch%20to%20a%20video%20background%2C%20there%20is%20a%20138%25%20improvement%20in%20conversion%20rate [accessed 10 Nov 2022].

Website Design Industry Statistics [online] (2022e) *TechJury*, available: https://techjury.net/blog/website-design-industry-statistics/#:~:text=78%25%20of%20shoppers%20want%20e%2Dcommerce%20sites%20to%20include%20more%20images%20on%20their%20product%20pages [accessed 10 Nov 2022].

Website Statistics: 60+ Website Stats to Know [online] (2022) *Web FX*, available: https://www.webfx.com/web-design/statistics/#:~:text=75%25%20of%20website%20credibility%20comes%20from%20design&text=So%2C%20if%20you%20aren%27t,audience%2C%20as%20well%20as%20sales. [accessed 10 Nov 2022].

**Lines of Enquiry:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hard Skills** | **Soft Skills** | **Languages** | **Software** | **Qualifications** |
| Do you need to have UX skills? | Do you need to have time management? | What coding languages are required for creating a website? | What software is required for graphical design? | Do you need a degree/3rd level education? |
| Do you need to know how to code? | Do you need to have IT skills? | Will there be a need to add any external libraries/frameworks? | What software is required for coding languages? | What makes you qualified to manage an e-commerce website? |
| Do you need to know how to prototype a website? | What soft skills are required to run an e-commerce website? | If the pre-made website is being hosted by another platform, do you need to understand their language and can you edit it? | What software is required for prototyping? | Are there many learning options available for web design/web development? |
| Do you need to have graphical design skills? |  | How many languages should you know before starting up the website? | What software is required for motion design/videos? | What is the average time of competition to become a web designer? |
| Do you need to know GDPR laws? |  | Is it hard to learn multiple programming languages? | What software is required for image manipulation? |  |

Do you need to know how to code?

User Experience skills are essential in making sure that the users have an enjoyable and easy to use experience. The skill itself is not a fundamental requirement, without it the website will function but the user drop of rate and customer satisfaction rate will plummet. More than likely, the website will fail overall as users won’t want to come back.

“70% of online businesses fall through because of bad UX.” - (Gajic 2022)

Do you need to have UX skills?

If you are setting up a website based of a CMS (Content Management System) like WordPress or Lightspeed then no, you will not need to know how to code to get the website live. If you want to however make any personalisation to your website outside of using other peoples pre-designed themes, then the bare minimum one will need to know is CSS (Cascading Style Sheets) and HTML (Hyper Text Markup Language).

Do you need to know how to prototype a website?

No, you do not need to know how to prototype a website to get started in e-commerce. The ability to prototype the website before building gets underway will alloy the developer/designer to fix any mistakes they might make, or to create a better UX design since they know how everything will be laid out prior to starting. It is however, not a must have skill to possess.

Yes. Knowing GDPR regulations and rules while designing a website is important. If using a CMS that has built in user control, you still must be aware of what you can and can’t do in relation to someone’s data. Neglecting these rules and guidelines can’t result in unsatisfactory customer interactions or in extreme cases, legal action.

If you are controlling the data yourself, then it is even more important to understand how long you can store the data and the level of security required.

Do you need to know GDPR laws?

Adding tailored graphics to a website will increase the overall design of the website and will also keep the users more engaged but it is not a requirement.

Do you need to have graphical design skills?

**Question 1:** Hard Skills

**SUMMARY:**

When it comes to hard skills, although they are not all required in order to initially setup the website, without them you will find that your website cannot hold up to larger brands and also the expectations that have come from the rise in online shopping due to Covid-19, and can also incur possible legal issues if neglected.

Do you need to have IT skills?

Time management skills are important when running a e-commerce website. If you receive 30 new products each week in store and can only upload 25 of them each week, then you will build up a certain amount of stock that won’t display on the website. This skill is also required to meet project deadlines.

Do you need to have time management?

To assume that you will never run into a technical issue when working with web design/web development would be negligent. A good understanding of IT is required to debug and fix any issues that may arise. A well rounded IT understanding isn’t required but you should have a firm understanding of the CMS you are using alongside any tools required.

What soft skills are required to run an e-commerce website?

To make sure that everything goes smooth, good time management, problem solving, organisation, and creative thinking skills are a necessity.

**Question 2:** Soft Skills

**SUMMARY:**

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

Will there be a need to add any external libraries/frameworks?

If creating from scratch, HTML, CSS, JavaScript and any framework such as Angular or React are capable of designing the front end of an e-commerce website. On the data side, you will need SQL to store products and customer data.

If using a CMS then a good understanding of HTML and CSS is fine for the basics. JavaScript will allow for more advanced customisation.

What coding languages are required for creating a website?

If working with a custom website then adding a framework isn’t required but it will speed up the overall completion time.

If using a CMS then you will find that most CMS use external libraries such as Bootstrap. A good understanding of Bootstrap will allow for a user to quickly make changes that can create a brand new, unique looking website. However, still not required but is advised.

If the pre-made website is being hosted by another platform, do you need to understand their language and can you edit it?

If you are working on another platform or CMS then you won’t be required to understand their language. A majority of CMS systems allow their users to change primary and secondary colours, font, and what widgets are displayed on their website without coding. This in turn means that the user will have a selected amount of customisation.

It is advised that you get to understand the code that is running your website in the background so that if anything does go wrong, you can fix it.

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

Is it hard to learn multiple programming languages?

You should know at least one language. The most important language when trying to create a bespoke website is CSS. This one language is used on nearly every website created. If you understand CSS then regardless of the style of the default website or theme that your CMS platform has, then you will be able to make changes to it.

If creating a bespoke website by hand then you will need a professional understanding of at least 3 languages.

How many languages should you know before starting up the website?

**Question 3:** Languages

**SUMMARY:**

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

**SUMMARY:**

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What software is required for coding languages?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What software is required for graphical design?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What software is required for prototyping?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What software is required for image manipulation?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What software is required for motion design/videos?

**Question 4:** Software

**SUMMARY:**

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What makes you qualified to manage an e-commerce website?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

Do you need a degree/3rd level education?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

Are there many learning options available for web design/web development?

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

What is the average time of competition to become a web designer?

**Question 5:** Qualifications