**Assignment no 1**

**Top 5 Web Development Trends for 2020**

1. Progressive web applications
2. Artificial intelligence and chatbots
3. WebAssembly
4. Single-page applications
5. Push notifications

## 1. Progressive Web Applications (PWA)

PWAs are websites that function like native mobile apps. By leveraging emerging tech and adapting HTML 5, businesses can achieve the best of both worlds: a website’s wide reach and a mobile app’s accessibility. The image above highlights 4 key technologies that distinguishes PWAs from traditional web apps. That includes the app shell architecture, transport layer security, service worker, and web app manifest file.

Many big brands have already made the switch from using websites to progressive web apps and have experienced significant increases in user engagement. Other companies that have adopted PWAs include:

* Uber
* Twitter
* Smashing Magazine
* Pinterest
* Forbes

**. Artificial Intelligence (AI) and Chatbots**

Gartner predicts [more than 85% of customer interactions will take place without humans(link is external)](https://www.gartner.com/imagesrv/summits/docs/na/customer-360/C360_2011_brochure_FINAL.pdf#page=2) by 2020. Just as the image above implies, [AI mimics human intelligence](https://clutch.co/developers/artificial-intelligence) and enhances a solution’s cognitive functions like learning, data collection/analysis, and multi-tasking automation. We can expect AI technology, like chatbots, to become more prevalent in 2020. Key benefits include:

* Offering greater customer satisfaction
* Increasing your customer base
* Reducing human errors
* Saving time, money, and effort
* Focusing on user experience

**3. WebAssembly**

When developing a web application, the performance should never be compromised. JavaScript makes big calculations slow, which directly affects user performance. This is why many renowned games and powerful applications are available as a native desktop app.

WebAssembly is a game-changer in the web development world. It’s an open standard that defines a portable binary code format for executable programs.

With the help of WebAssembly, you can compile programming language code into bytecode that runs in a browser.

WebAssembly is built with high-level goals:

* Harness hardware capabilities to be portable and efficient
* Build modular binaries utilizing imports and exports in a particular way
* Support non-browser embedding
* Integrate the existing web platform

**4. Single-Page Applications**

Single-page application reduces reloading requirements for web pages by using JavaScript to load content. These applications don’t require additional waiting time and render web pages in the user’s browser.

Google, Gmail, and GitHub are the best examples of single-page application.

Single-page applications are also popular because all relevant information is displayed on a single page — after all, people don’t like to run around pages to search for information. This allows us to think about the concept of single-page sites and how it affects the user’s experience.

Within a few years, readers might even glare at a screen and nod to indicate which products to buy.

**5. Push Notifications**

Today customers engage with brands across more touch points than ever before. Websites and [mobile apps](https://clutch.co/directory/mobile-application-developers) that have push notifications reach a wider audience while leveraging the benefits of online marketing.

Push notifications are one of the most powerful solutions for visitors, having the potential to transform remarketing effectiveness based on how timely, relevant, and precise the notifications are.

Push notifications pose a direct communication link between you and your customers. Reasons to use push notifications include:

* Targeting a specific userbase based on age, gender, location, and purchase history
* Avoiding spam filters to get your message across
* Keeping your brand on top of the customer’s mind.