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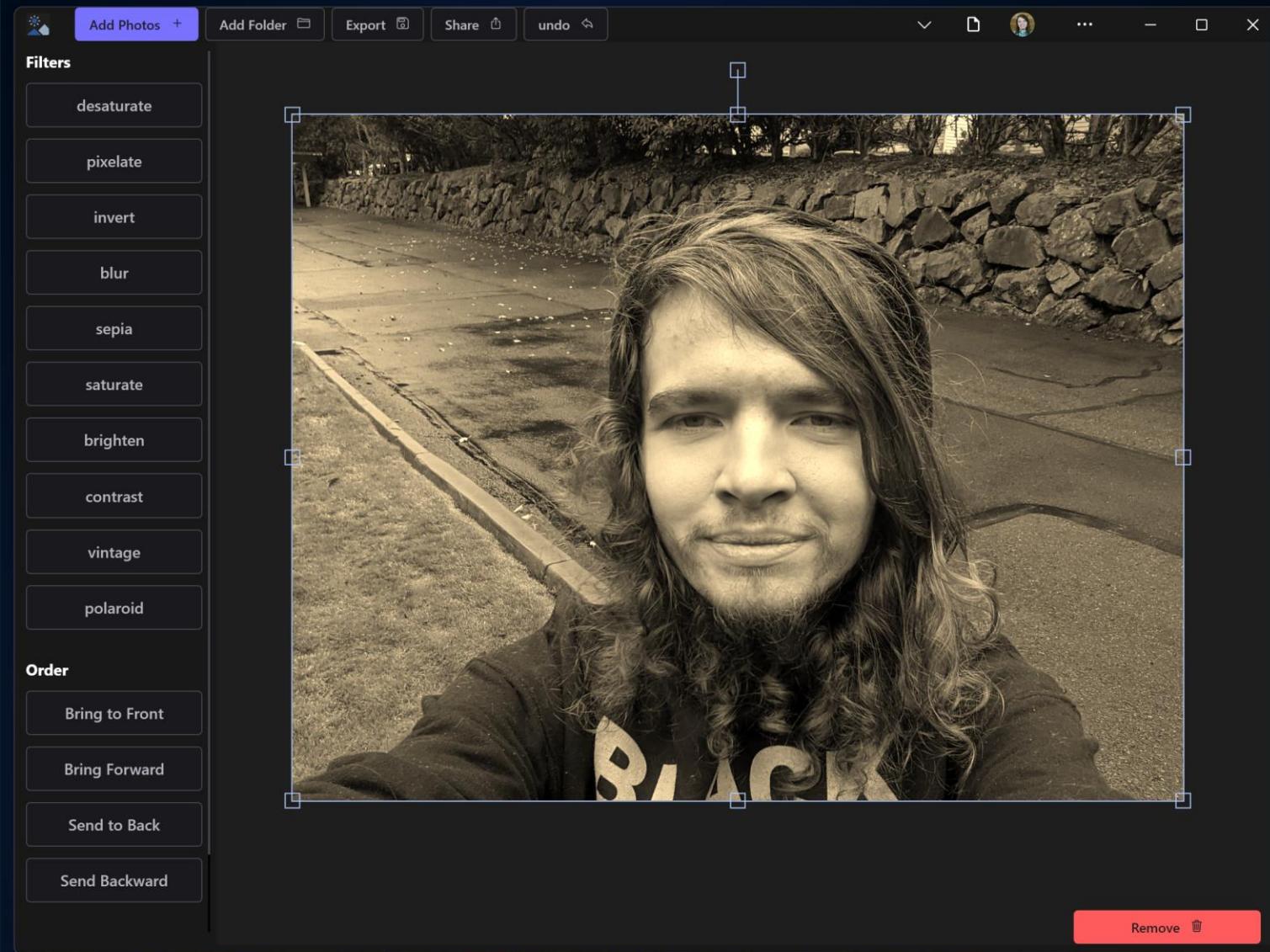


The world of PWA tools

From Starter to Builder

What is a Progressive Web Application?

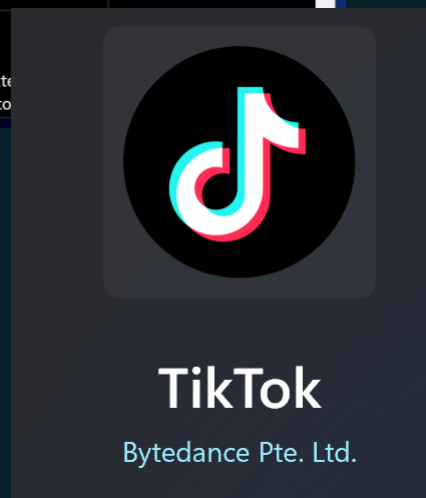
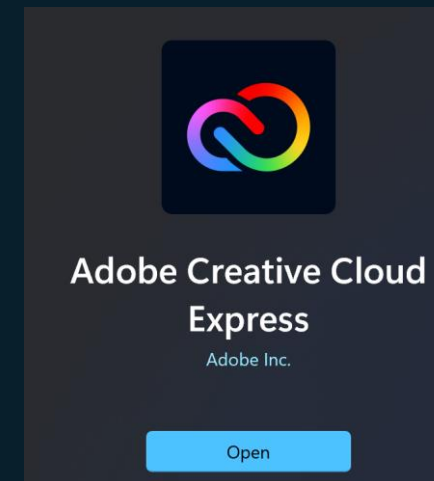
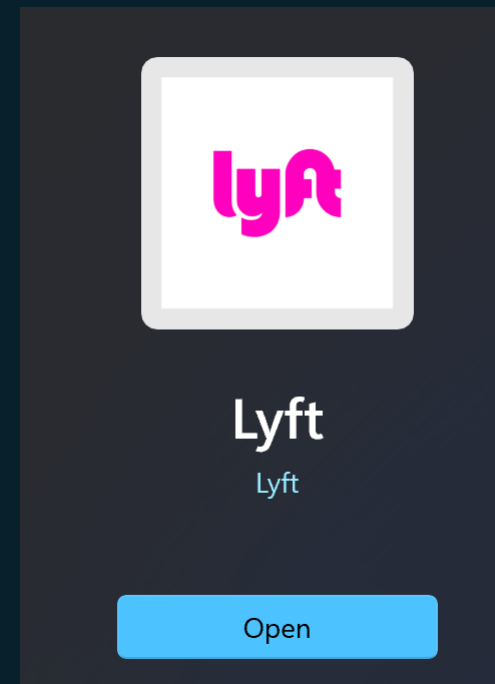
- Modern Web Application
- Has a Web Manifest, Service Worker and HTTPS
- Access to advanced capabilities
- Installable from the Microsoft Store, Google Play, Edge and Chrome
- Awesome support on Windows
- Work on any device with a modern web browser



Why build a PWA?

- Works GREAT on Windows (and other OS's such as Android)
- Cross-Platform by default, with one codebase, including different CPU architectures such as arm
- Lightweight
- Already have web development skills? *Easy* to get started
- Adapts to your device, including dual-screen and foldables

Let's look at some examples

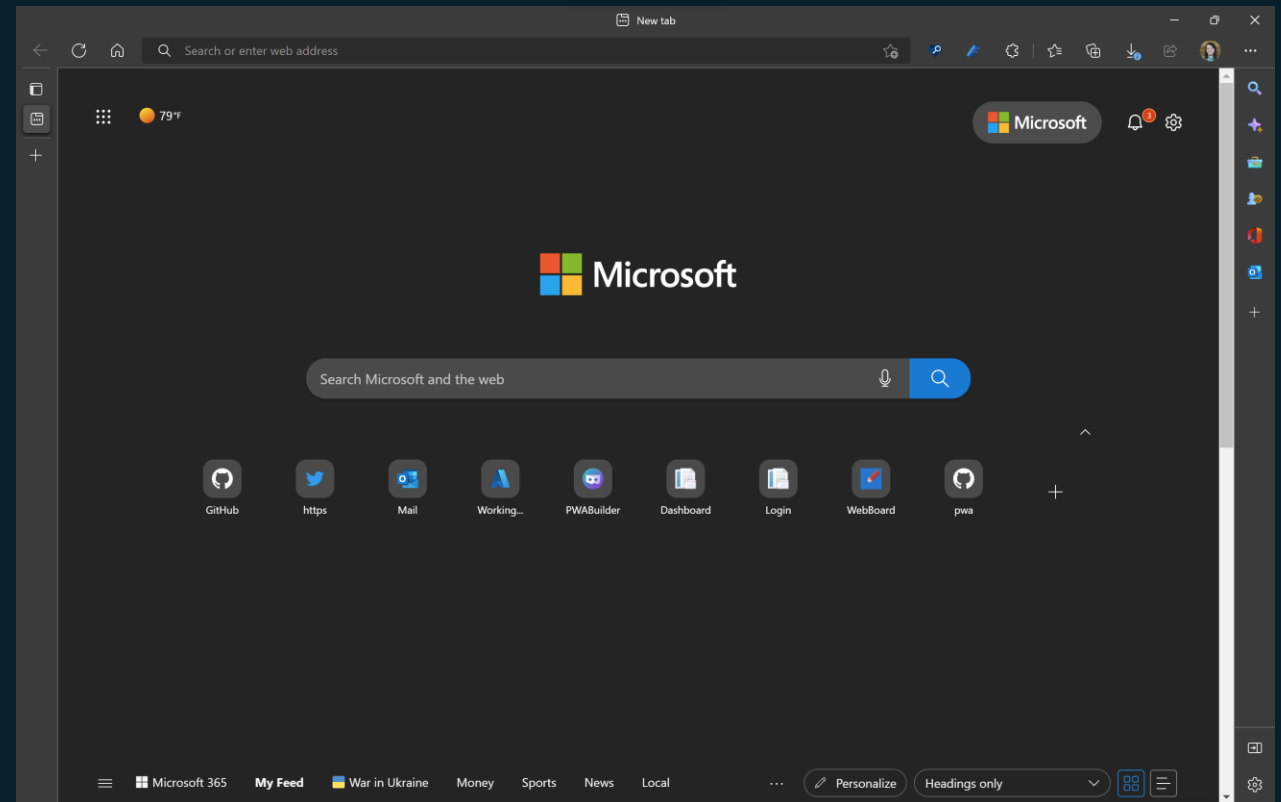


Capabilities

- Web Bluetooth
- Web Assembly
- Low-Latency audio processing
- DRM content playback
- Web Share
- Shortcuts
- Share Target
- Background Sync + Periodic Sync
- Low-latency canvas
- Offscreen Canvas
- File System Access API
- Background Fetch
- Persistent Storage API
- Wake Lock API
- And more!

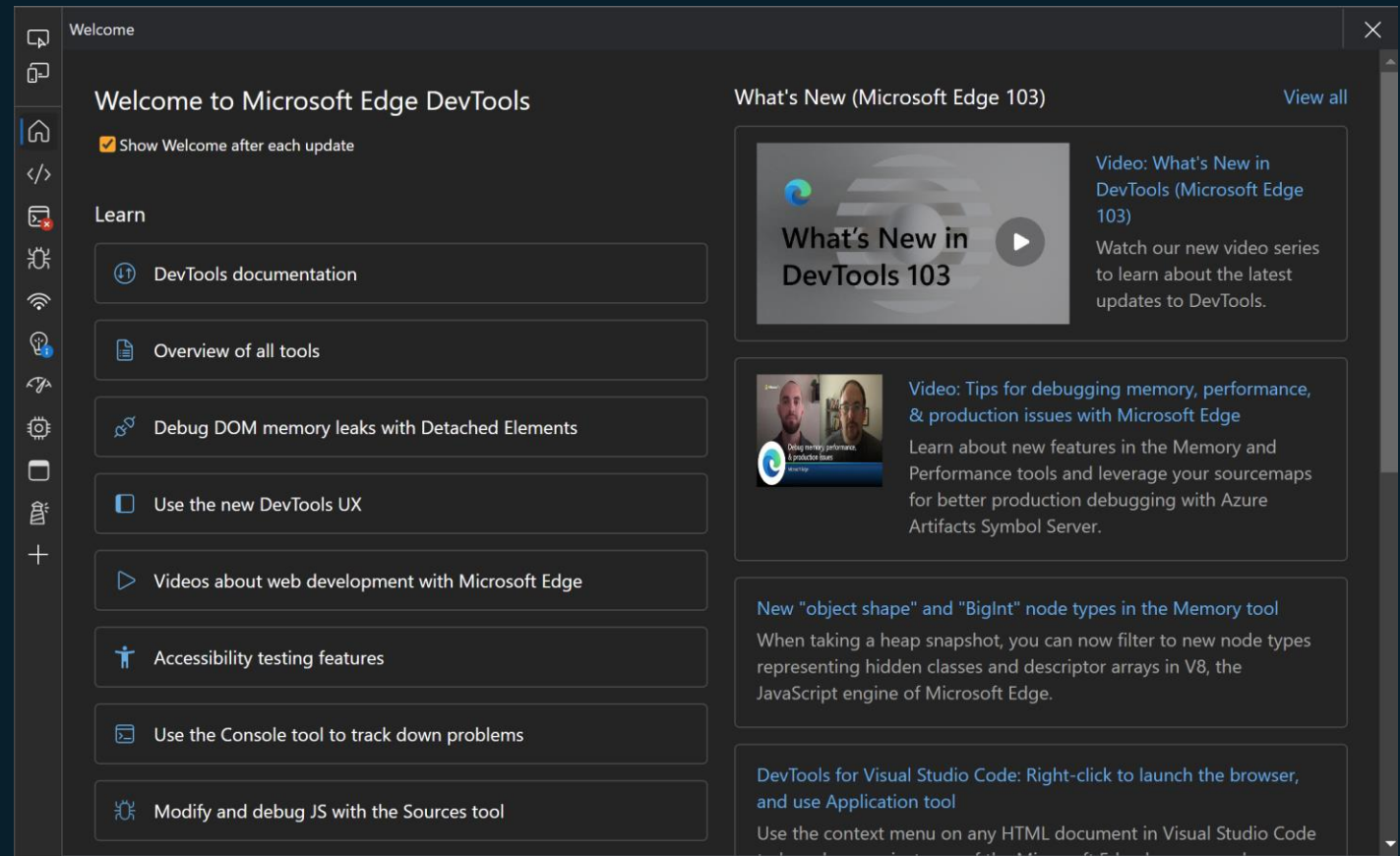
Microsoft Edge

- Chromium based
- Powers the PWA experience on Windows
- Microsoft is one of the largest contributors to the Chromium open-source project



What about devtools?

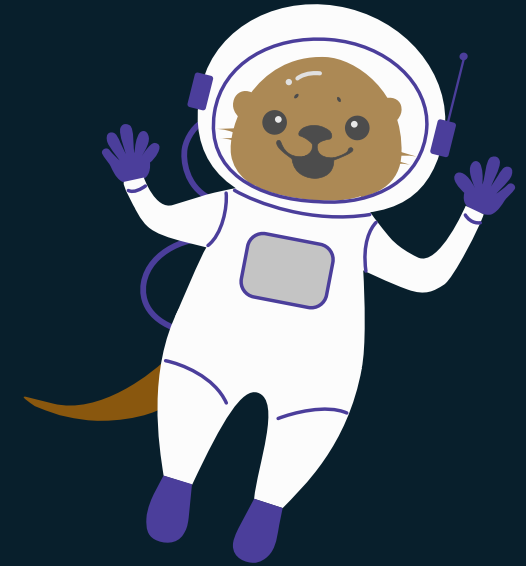
- Accessibility tools
- Performance auditing tools
- Dive deep into your app performance
- Emulate different network connections and devices



What is PWABuilder?

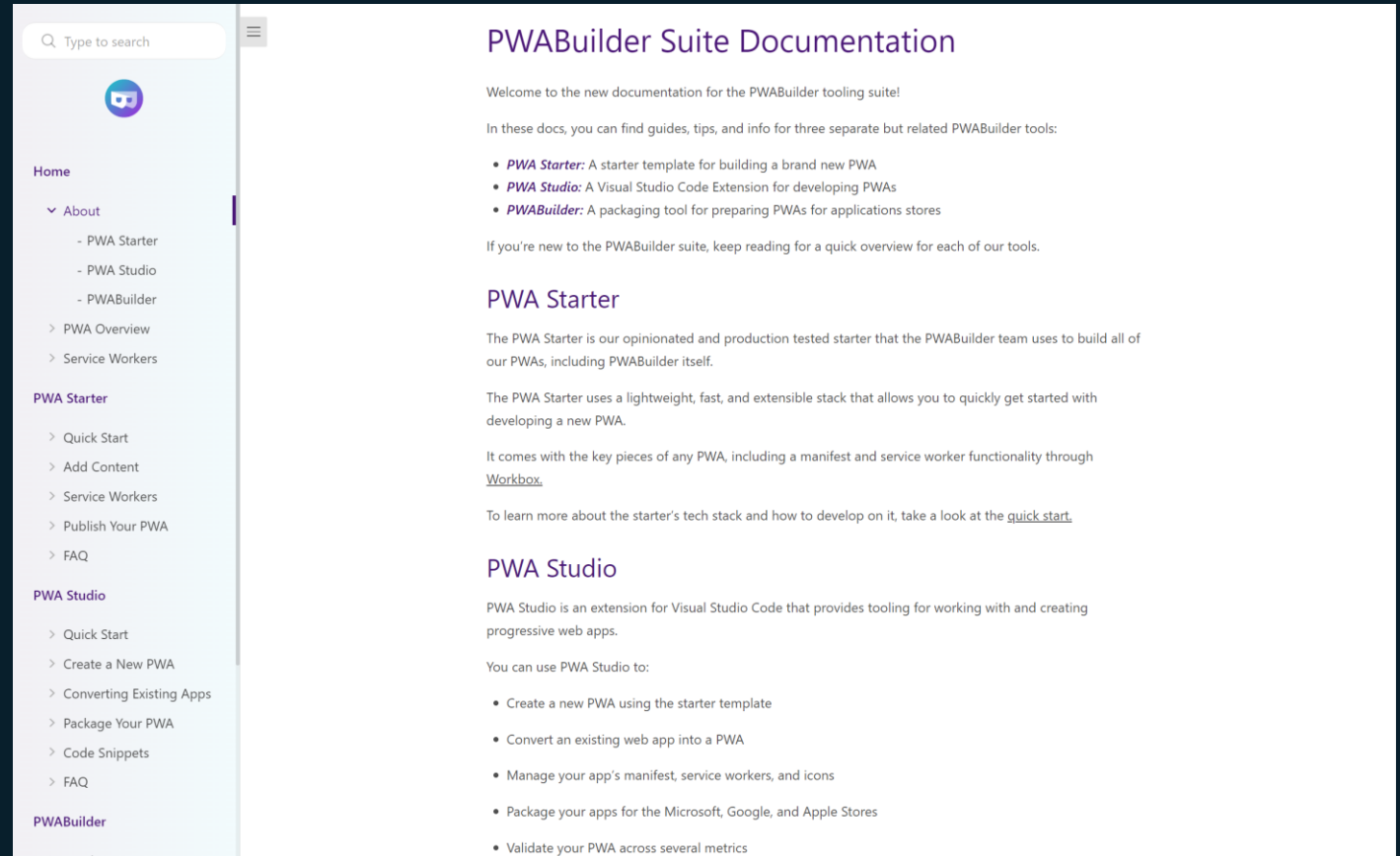
PWABuilder is an open-source collection of tools, documentation and more to help you build high quality Progressive Web Applications.

- PWABuilder site: <https://pwabuilder.com>
- PWABuilder docs: <https://docs.pwabuilder.com>
- PWABuilder Studio: <https://aka.ms/install-pwa-studio>
- PWA Starter: <https://aka.ms/pwa-starter>



PWABuilder documentation

- <https://docs.pwabuilder.com> has all the documentation you will need to use any of the tools in the PWABuilder project
- Also has guidance on publishing to all the app stores



The screenshot shows the PWABuilder Suite Documentation website. On the left is a sidebar with a search bar at the top. Below it is a logo and a navigation menu with sections: Home, About (with sub-items: PWA Starter, PWA Studio, PWABuilder), PWA Overview, Service Workers, PWA Starter (with sub-items: Quick Start, Add Content, Service Workers, Publish Your PWA, FAQ), PWA Studio (with sub-items: Quick Start, Create a New PWA, Converting Existing Apps, Package Your PWA, Code Snippets, FAQ), and PWABuilder (with sub-item: Quick Start). The main content area has the title 'PWABuilder Suite Documentation' and a welcome message. It lists three tools: PWA Starter, PWA Studio, and PWABuilder. Below this is a section for 'PWA Starter' with an introduction and a link to 'Workbox'. Then there is a section for 'PWA Studio' with an introduction and a list of actions you can perform with it.

PWABuilder Suite Documentation

Welcome to the new documentation for the PWABuilder tooling suite!

In these docs, you can find guides, tips, and info for three separate but related PWABuilder tools:

- **PWA Starter:** A starter template for building a brand new PWA
- **PWA Studio:** A Visual Studio Code Extension for developing PWAs
- **PWABuilder:** A packaging tool for preparing PWAs for applications stores

If you're new to the PWABuilder suite, keep reading for a quick overview for each of our tools.

PWA Starter

The PWA Starter is our opinionated and production tested starter that the PWABuilder team uses to build all of our PWAs, including PWABuilder itself.

The PWA Starter uses a lightweight, fast, and extensible stack that allows you to quickly get started with developing a new PWA.

It comes with the key pieces of any PWA, including a manifest and service worker functionality through [Workbox](#).

To learn more about the starter's tech stack and how to develop on it, take a look at the [quick start](#).

PWA Studio

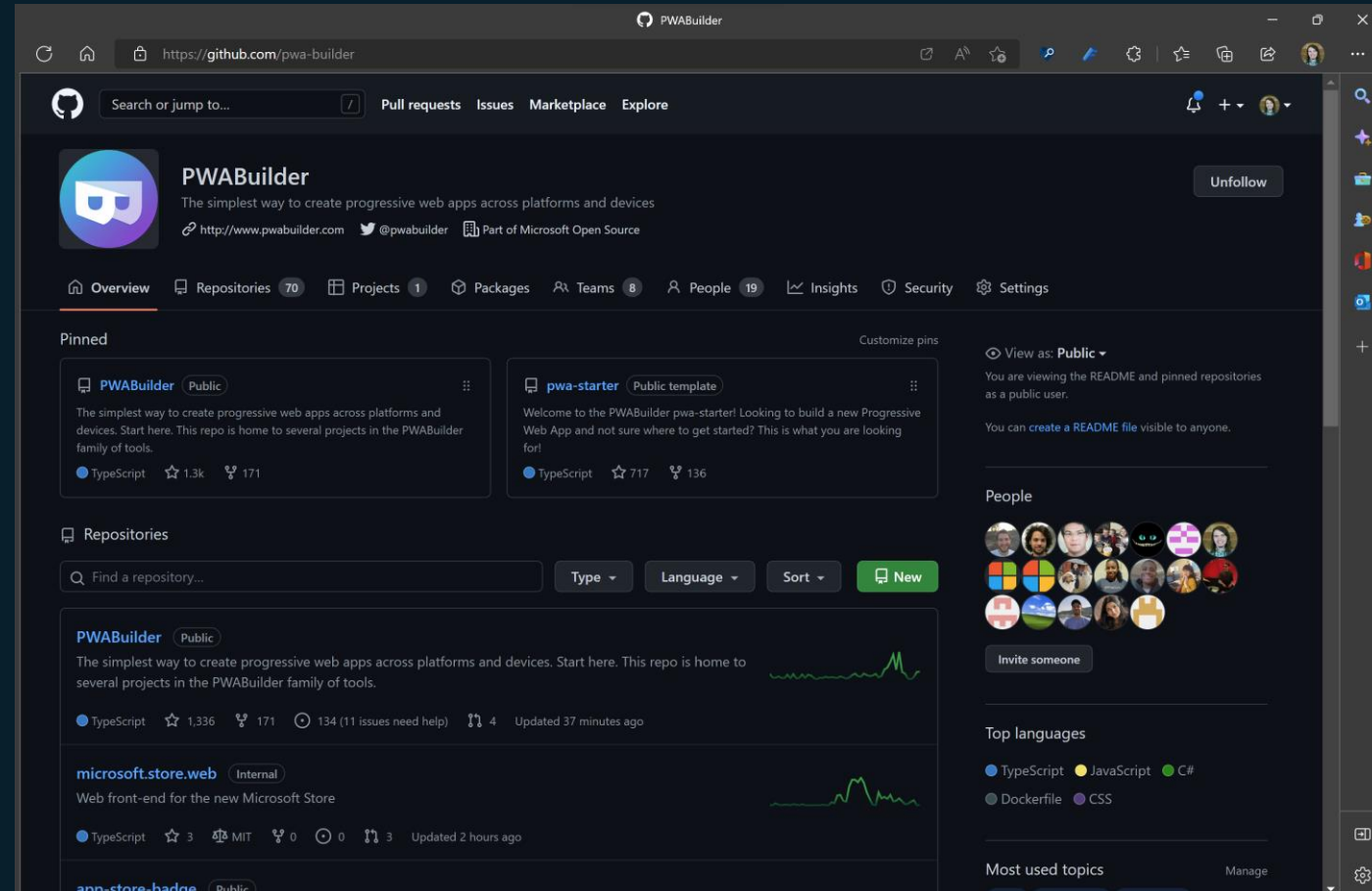
PWA Studio is an extension for Visual Studio Code that provides tooling for working with and creating progressive web apps.

You can use PWA Studio to:

- Create a new PWA using the starter template
- Convert an existing web app into a PWA
- Manage your app's manifest, service workers, and icons
- Package your apps for the Microsoft, Google, and Apple Stores
- Validate your PWA across several metrics

Community + Contribution

- PWABuilder is a community driven open-source project
- You can interact with the community (and even members of the PWABuilder team!) on our [Discord](#)
- You can also follow us on Twitter!
<https://twitter.com/pwabuilder>
- Looking for a project to contribute to?
<https://github.com/pwa-builder/PWABuilder>



PWA Starter

- App Code Template
- Everything you need to start building your PWA, in just a few button clicks
- Alleviating Choice Anxiety: We have decided the web framework, service worker setup, build setup etc etc
- Like building high quality, fast, lightweight apps?
- <https://aka.ms/pwa-starter>

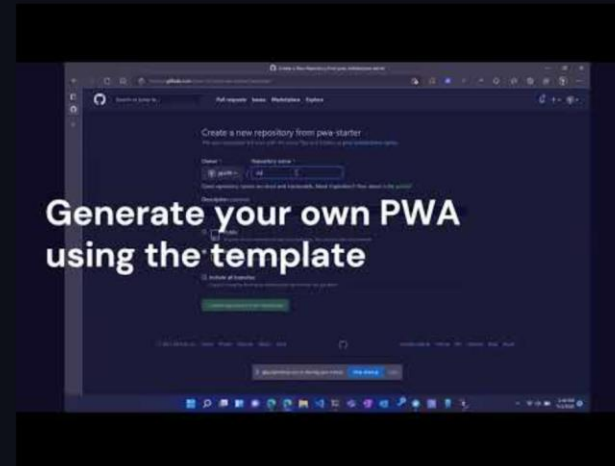
README.md

[pwa-starter](#)

Please use our [main repository](#) for any issues/bugs/features suggestion.

Documentation

The PWABuilder pwa-starter is our opinionated, best practices, production tested starter that we use to build all of our PWAs, including [PWABuilder itself](#)! The pwa-starter is a starter codebase, just like create-react-app or the Angular CLI can generate, that uses the PWABuilder team's preferred front-end tech stack.

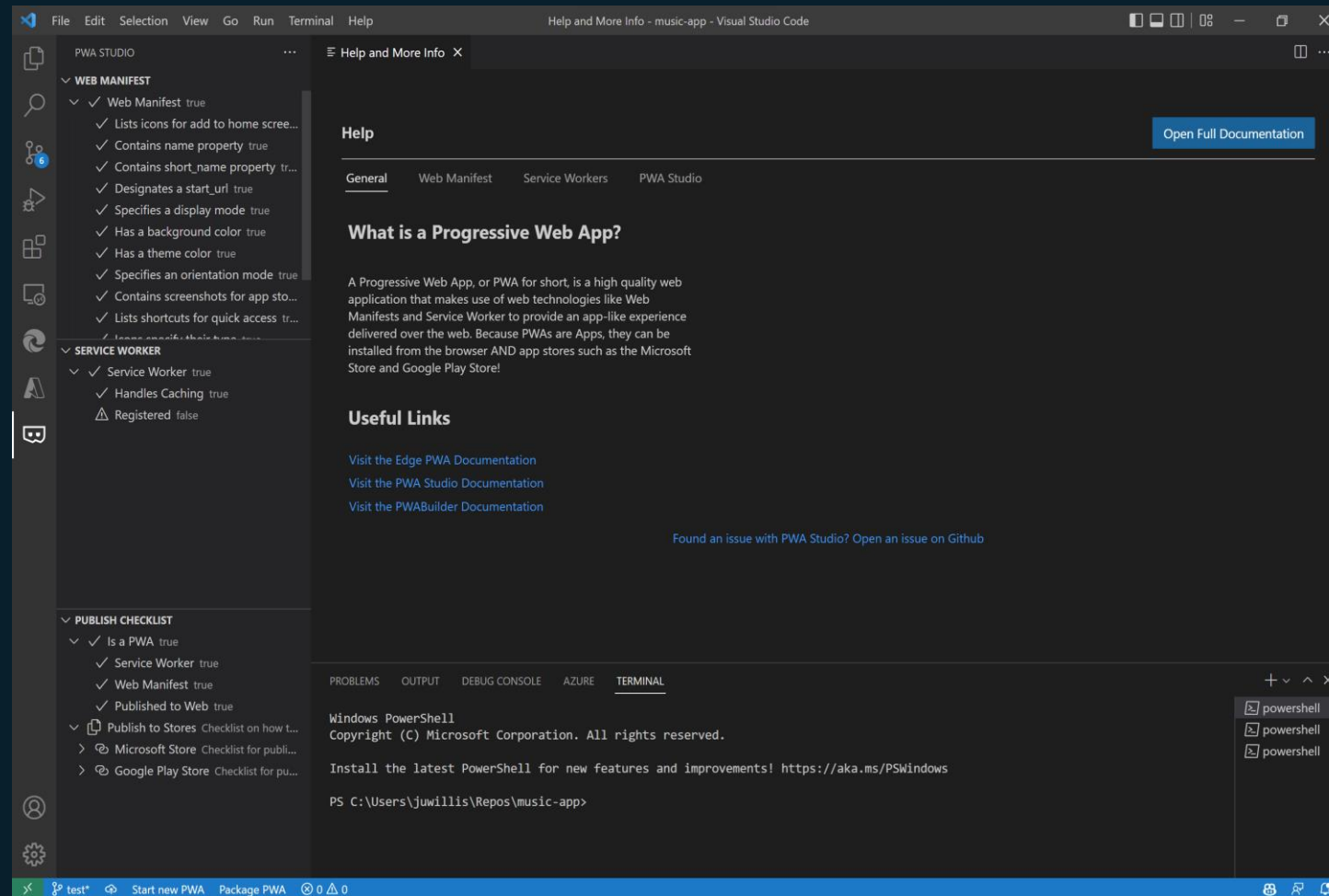


With it you get an app that:

- Has no build system to set up and no boilerplate code to add. Everything is included out of the box.
- Has a Service Worker system using [Workbox](#)
- Scores close to 100 on Lighthouse out of the box
- Using the fluent Web Components, you can build native looking PWAs on Windows

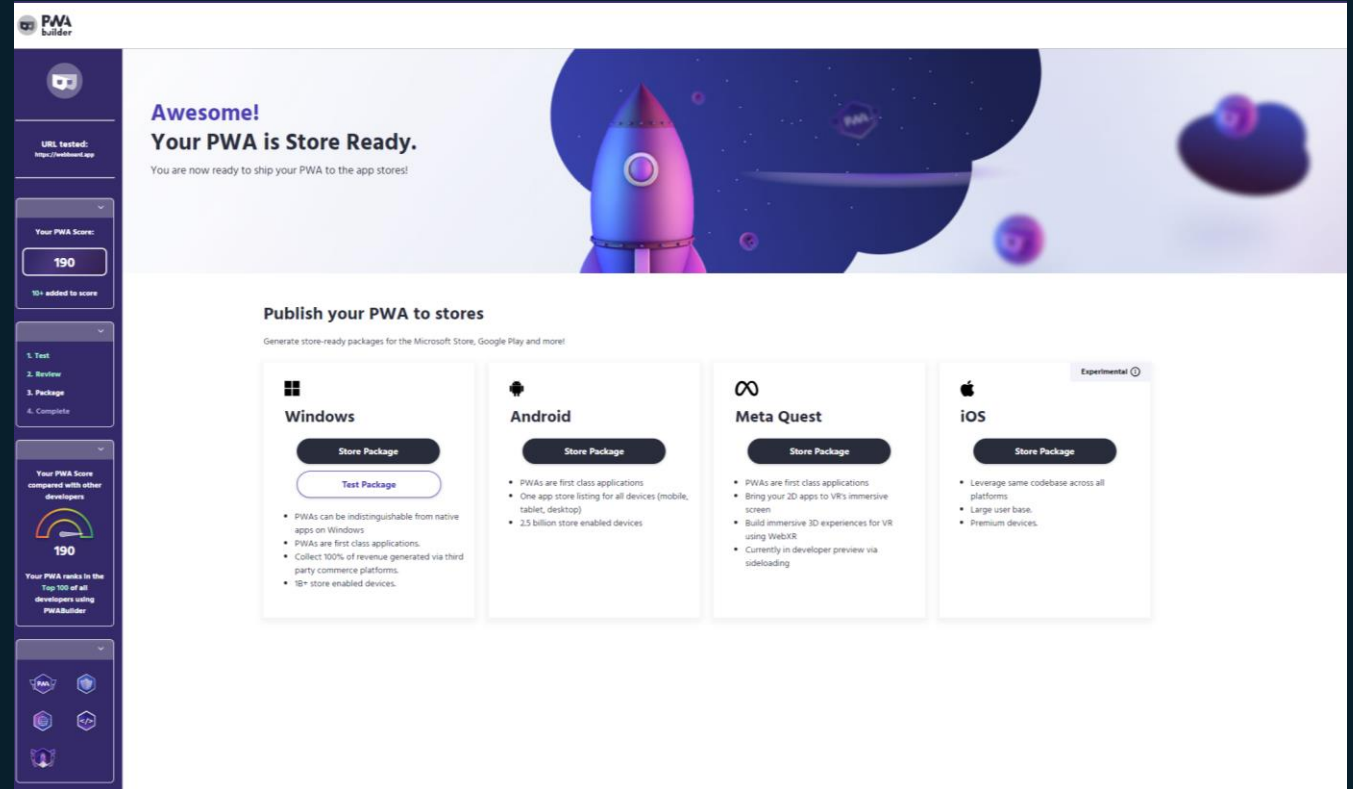
PWABuilder Studio

- VSCode Extension that brings the best of PWABuilder into your VSCode
- Start a new app, generate web manifests, icons etc and package your app, all without leaving VSCode



PWABuilder.com

- One-stop shop for all your PWA packaging needs!
- Scans your PWA for missing parts in your manifest, service worker and security
- Allows you to package for
 - Microsoft Store
 - Google Play Store
 - Meta Quest 2
 - iOS App store



PWAs in Virtual Reality!

PWAs are supported on VR devices such as Microsoft HoloLens and Meta Quest 2!



PWAs on Dual Screen and Foldable devices!

- PWAs can be customized for Dual Screen devices, such as the Surface Duo, and Foldables like the Samsung Galaxy Z Fold
- Just CSS!
- Edge devtools can emulate both devices, making testing and dev easy



Add Photos +

Add Folder 📁

Export 📄

Share 📤

undo ↶

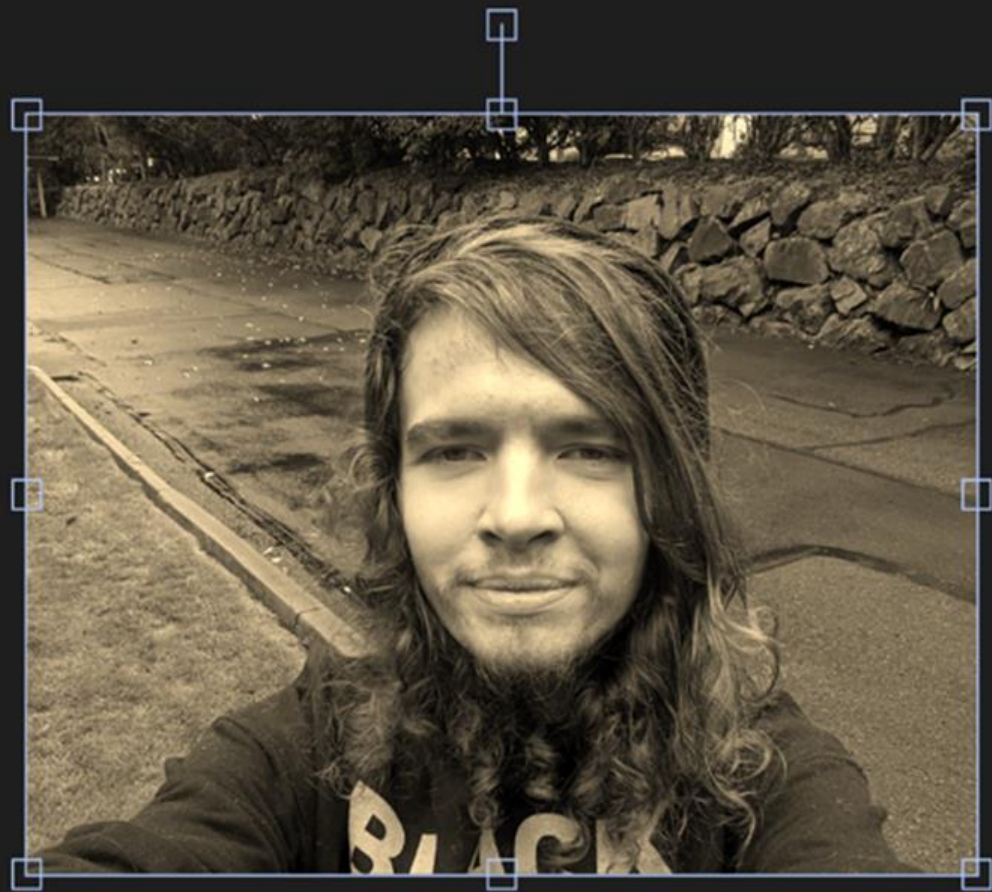
Filters

desaturate

pixelate

invert

blur



Resources

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- PWABuilder docs: <https://docs.pwabuilder.com>
- PWABuilder Studio: <https://aka.ms/install-pwa-studio>
- PWA Starter: <https://aka.ms/pwa-starter>
- GitHub: <https://github.com/pwa-builder/PWABuilder>