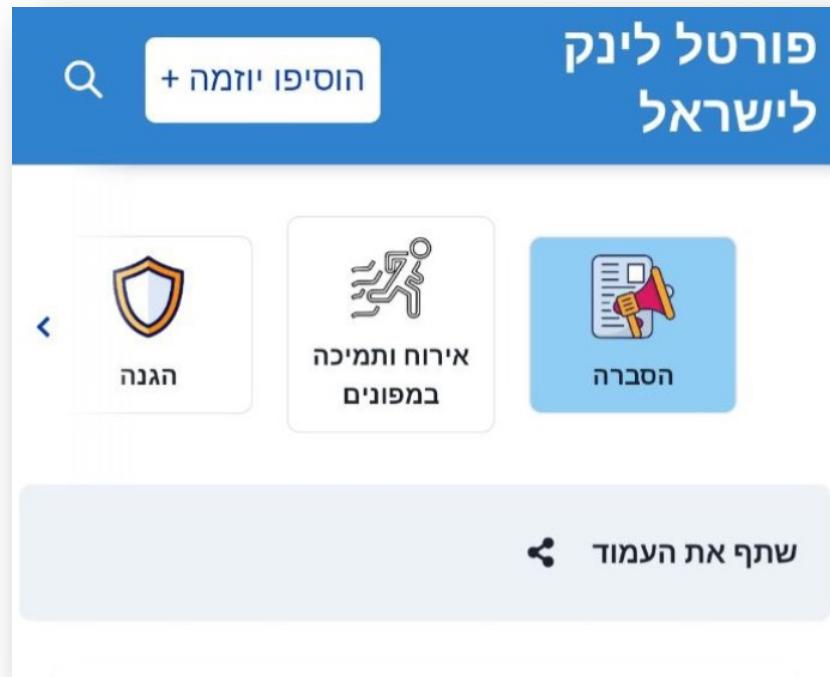




Unlocking JavaScript's Hidden Gems

Once upon a time...



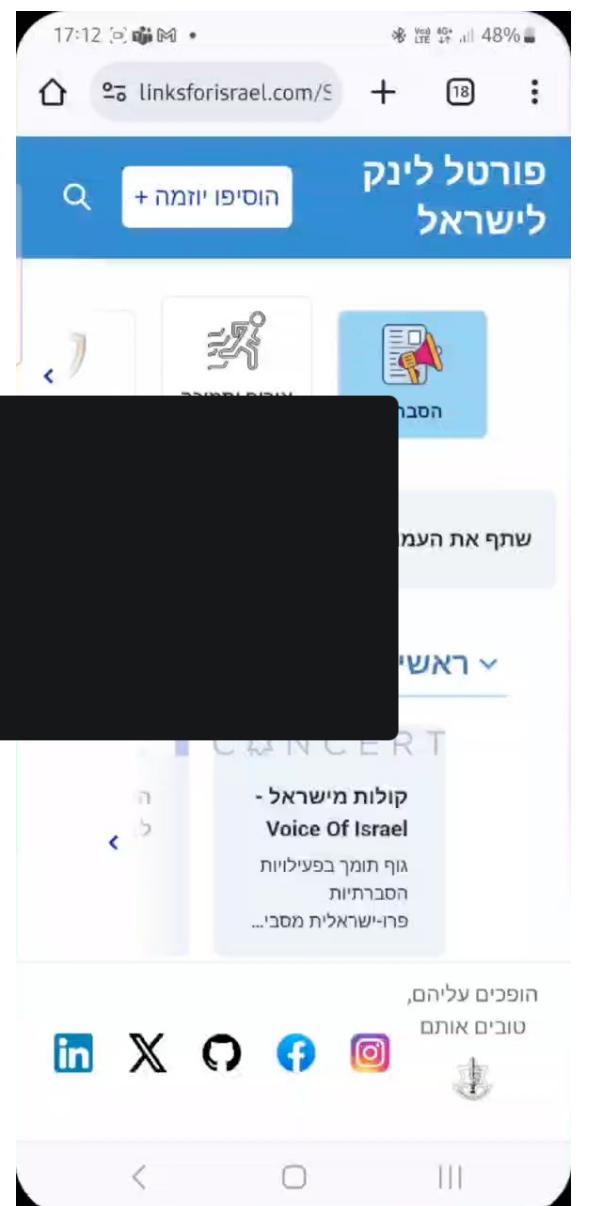
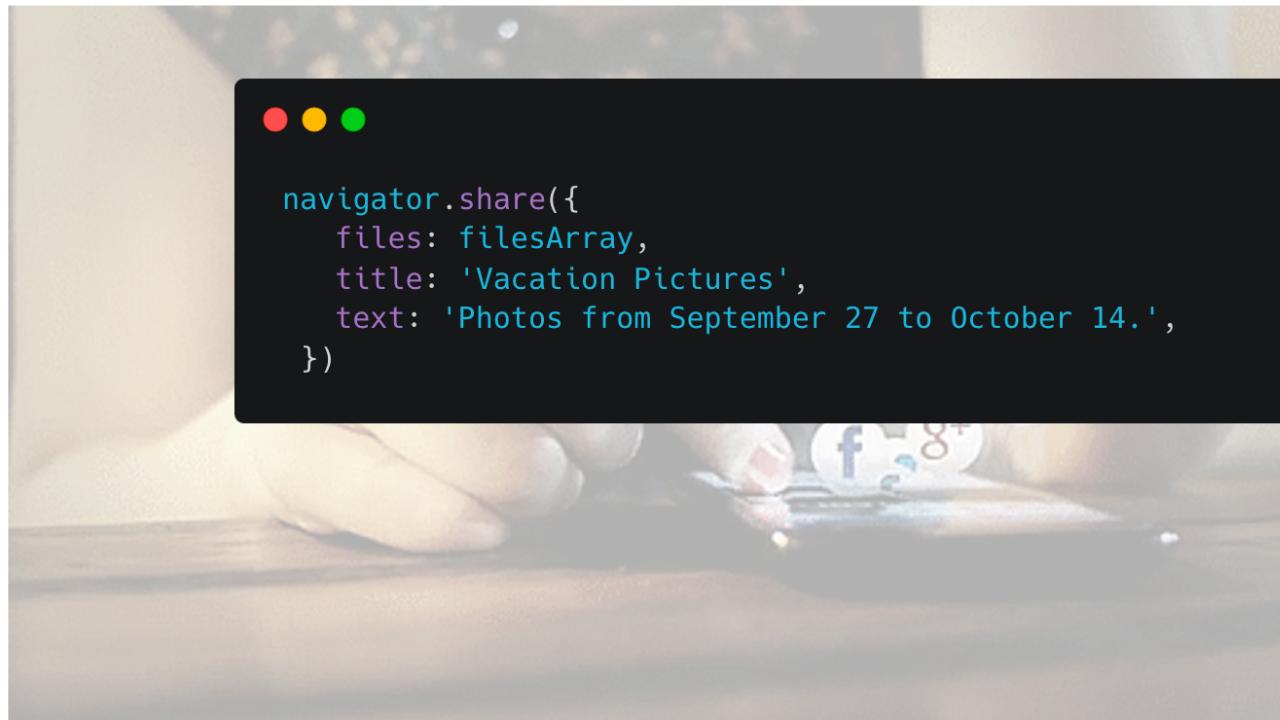
Once upon a time...



Web Share API

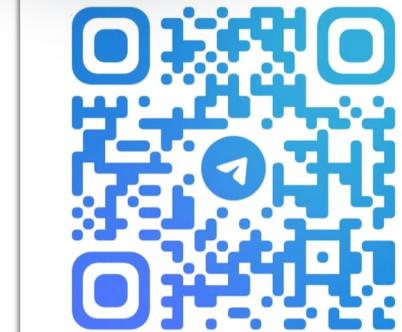
A screenshot of a mobile web browser interface. At the top, the URL 'linksforisrael.com/' is visible along with a search bar containing the text 'הויספו יוזמה +'. The main header reads 'פורטל-link לשראל' (Portal-link Israel). Below the header are three buttons: one with a gear icon labeled 'ארוחות ותמיינה במפות ניידים' (Meals and themes on mobile maps), another with a megaphone icon labeled 'הסברת' (Explanation), and a third partially visible. A large button below these says 'שתף את העמוד' (Share the page). A section titled 'ראשי' (Headlines) shows a card for a 'CONCERT' by 'קולות ישראל - Voice Of Israel' with text about their participation in various activities. At the bottom, there are links for social media platforms like LinkedIn, X (Twitter), and Facebook, along with the Israeli flag icon.

Once upon a time...



About me

- 👩‍🦰👩‍🦰👩‍🦰👩‍🦰inja 🐶🦜
- **Loving Web Tech**
- **Love The Community**
- **<https://yedri.medium.com/>**
- **Developer @ CyberArk**

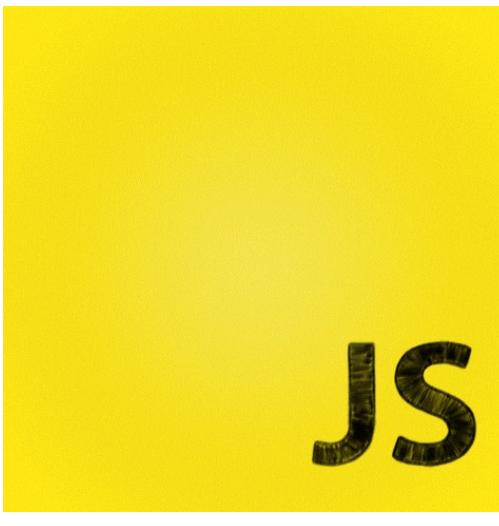


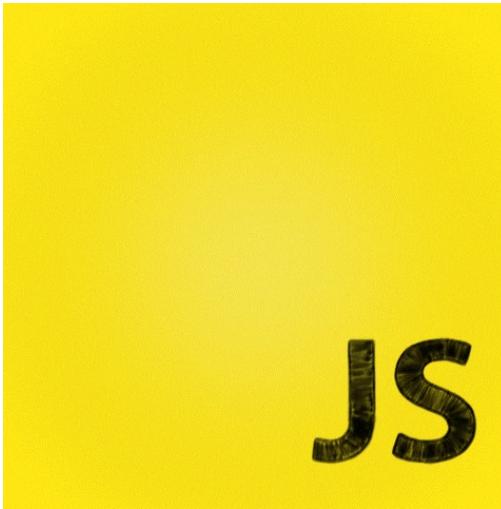
Web APIs

Web APIs

use with caution







Unfamiliar API in Web Development



Let's help Arbel

App Ideas

Share recipe



Notifications API

Notifications API



```
const notification = new Notification("Hello reversim 2024", {
  badge: "https://i.imgur.com/3424582.png",
  icon: "https://i.imgur.com/3424582.png",
  body: "Reversim 2024 - notification demo",
  // for mobile vs service worker
  vibrate: [100, 50, 100],
  actions: [
    {
      action: "open",
      title: "Open the site",
    },
    ...
  ],
});
```

[Demo](#)

Notifications API

[Demo](#)

(: זה דוגמא לנוטיפיקציה

Notify me!

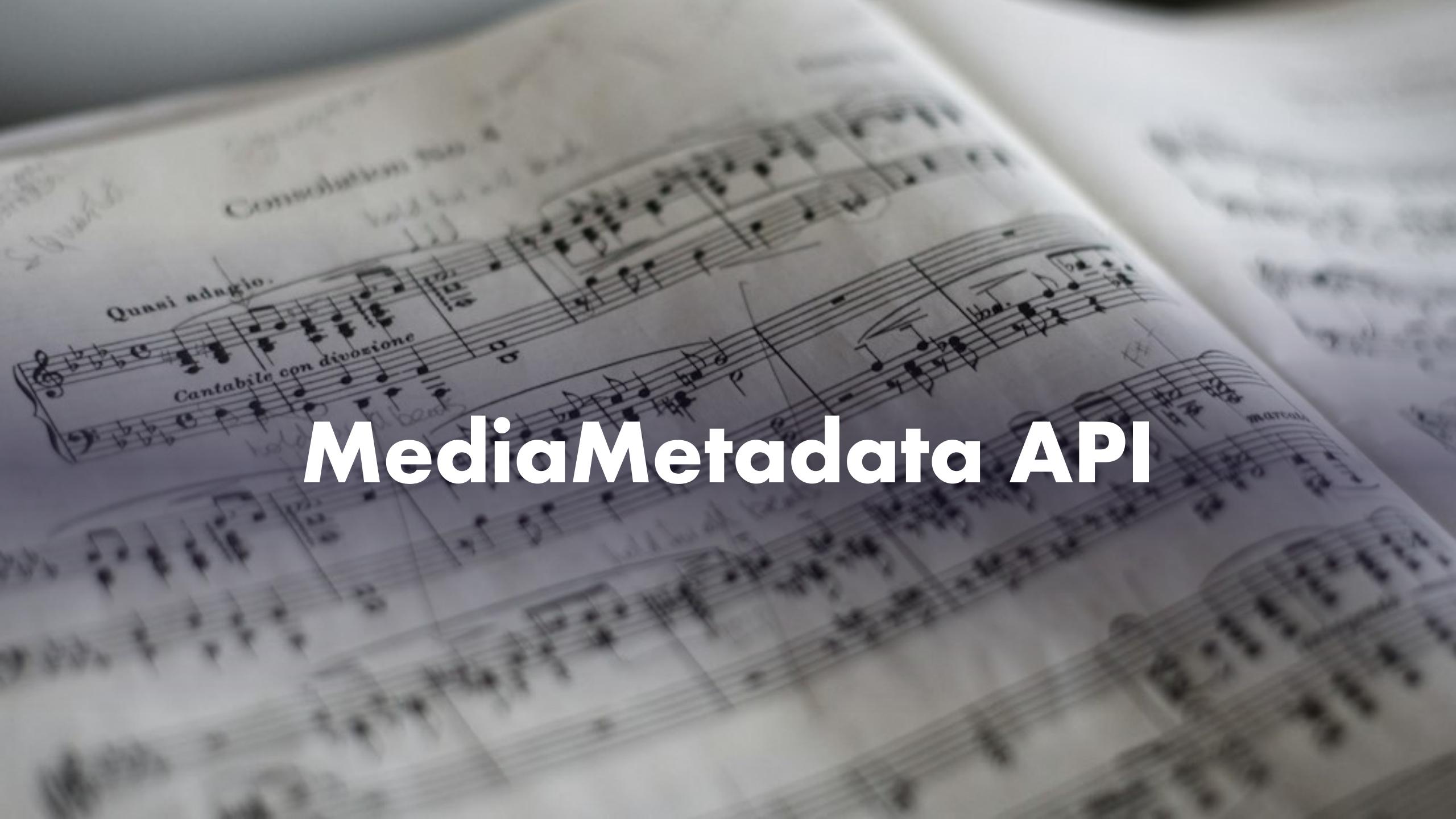
App Ideas

Share recipe

Notification - Clock alert



MediaMetadata API



MediaMetadata API



```
navigator.mediaSession.metadata =  
new MediaMetadata({  
  title: "Unlocking JavaScript's Hidden Gems",  
  artist: 'Yanai Edri',  
  album: 'Reversim submit 2024'  
})
```

Chrome File Edit View History Bookmarks Profiles Tab Window Help

Sun 4 Feb 21:09

Rick Astley - Never Gonna Give You Up

youtube.com/watch?v=dQw4w9WgXcQ

Apps Testing Playground... Business Conference... AppGyver Lint Images CyberArk - Dynam... Torrent Finder :: To... CyberArk - Dynam... My Benefits Netlify All Bookmarks

YouTube

הענלה (k)

0:00 / 3:32

RICK ASTLEY

desianrr

Rick Astley - Never Gonna Give You Up (Official Music Video)

Elements Console Sources Performance insights Network Performance Memory Application Security Lighthouse > 30 2 4 3 hidden

Default levels ▾ 51 Issues: 2 45 4 8 verbose

38 messages

- No user messages
- No errors
- 30 warnings
- No info

8 verbose

The screenshot shows a Chrome browser window with a YouTube video playing. The video frame shows Rick Astley singing into a microphone. Below the video is a standard YouTube control bar with play/pause, volume, and timestamp (0:00 / 3:32). The browser's address bar displays the URL youtube.com/watch?v=dQw4w9WgXcQ. The top menu bar includes options like Chrome, File, Edit, View, History, Bookmarks, Profiles, Tab, Window, and Help. The system tray at the top right shows various icons for battery, signal, and date/time (Sun 4 Feb 21:09). The developer tools console is open at the bottom, showing 51 issues with 30 warnings. The warning list includes: 38 messages, No user messages, No errors, 30 warnings, and No info.

App Ideas

Share recipe

Notification - Clock alert

Video - Describe Cake



Web Speech API



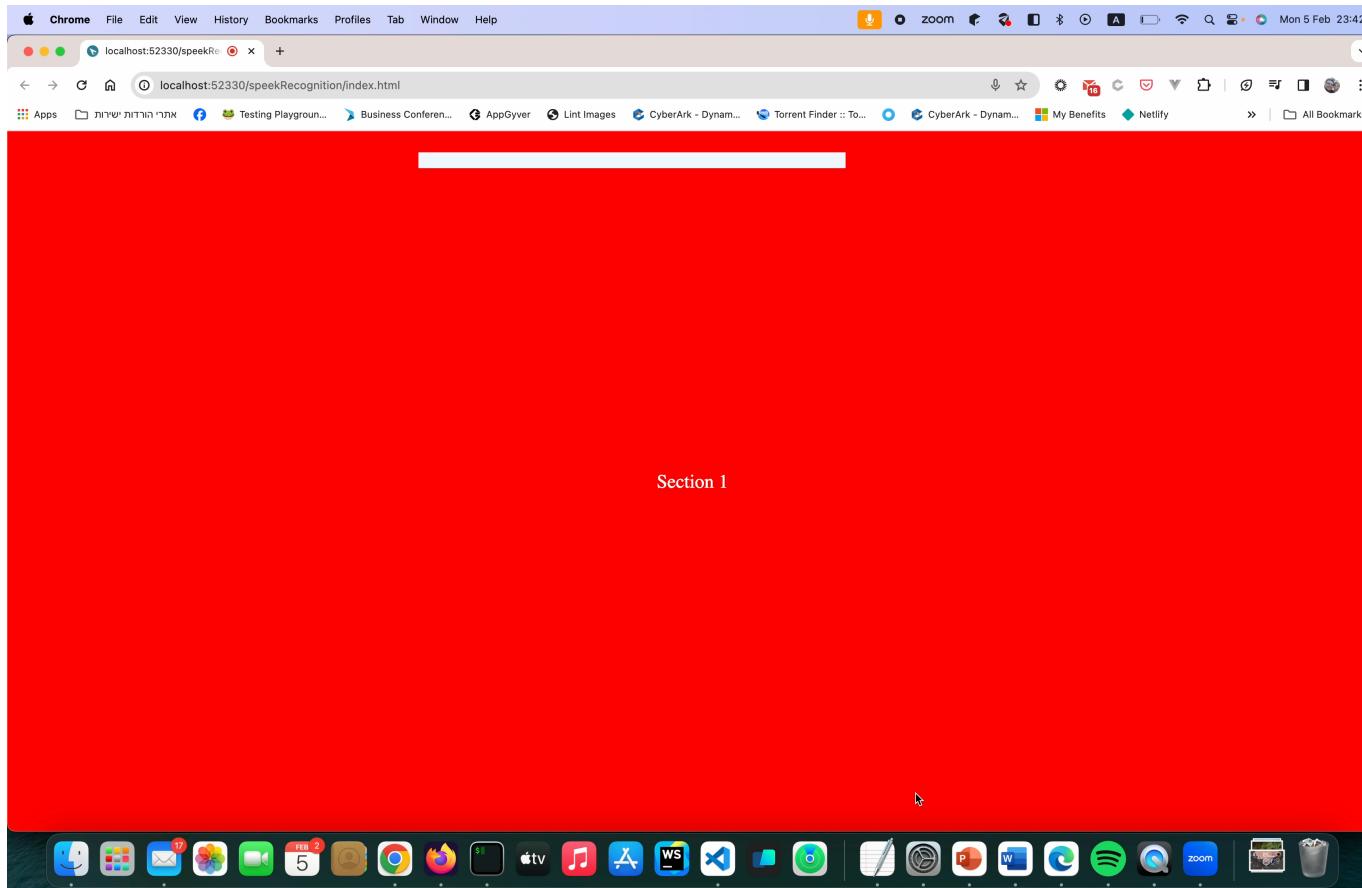
Web Speech API

Speech recognition + Speech Grammar



```
const recognition = new SpeechRecognition();
const speechRecognitionList = new SpeechGrammarList();
```

Web Speech API



[Demo](#)

Web Speech API

SpeechSynthesis



```
let utterance = new SpeechSynthesisUtterance("Hello world!");
speechSynthesis.speak(utterance);
```

Web Speech API- SpeechSynthesis

```
...  
const utterance = new SpeechSynthesisUtterance();  
utterance.pitch = document.getElementById("pitch").value;  
utterance.rate = document.getElementById("rate").value;  
// Use the speech synthesis API to play the text  
speechSynthesis.speak(utterance);  
...
```

[Demo](#)

App Ideas

Share recipe

Notification - Clock alert

Video - Describe Cake

Voice navigation



DocumentPictureInPicture API



DocumentPictureInPicture API

```
● ● ●  
  
const videoPlayer = document.getElementById("player");  
  
// Open a Picture-in-Picture window.  
const pipWindow = await window.documentPictureInPicture.requestWindow({  
  width: videoPlayer.clientWidth,  
  height: videoPlayer.clientHeight,  
});  
  
// ...
```

[Demo](#) [Demo](#)

*Not only for Video!!!

DocumentPictureInPicture

API



App Ideas

Share recipe

Notification - Clock alert

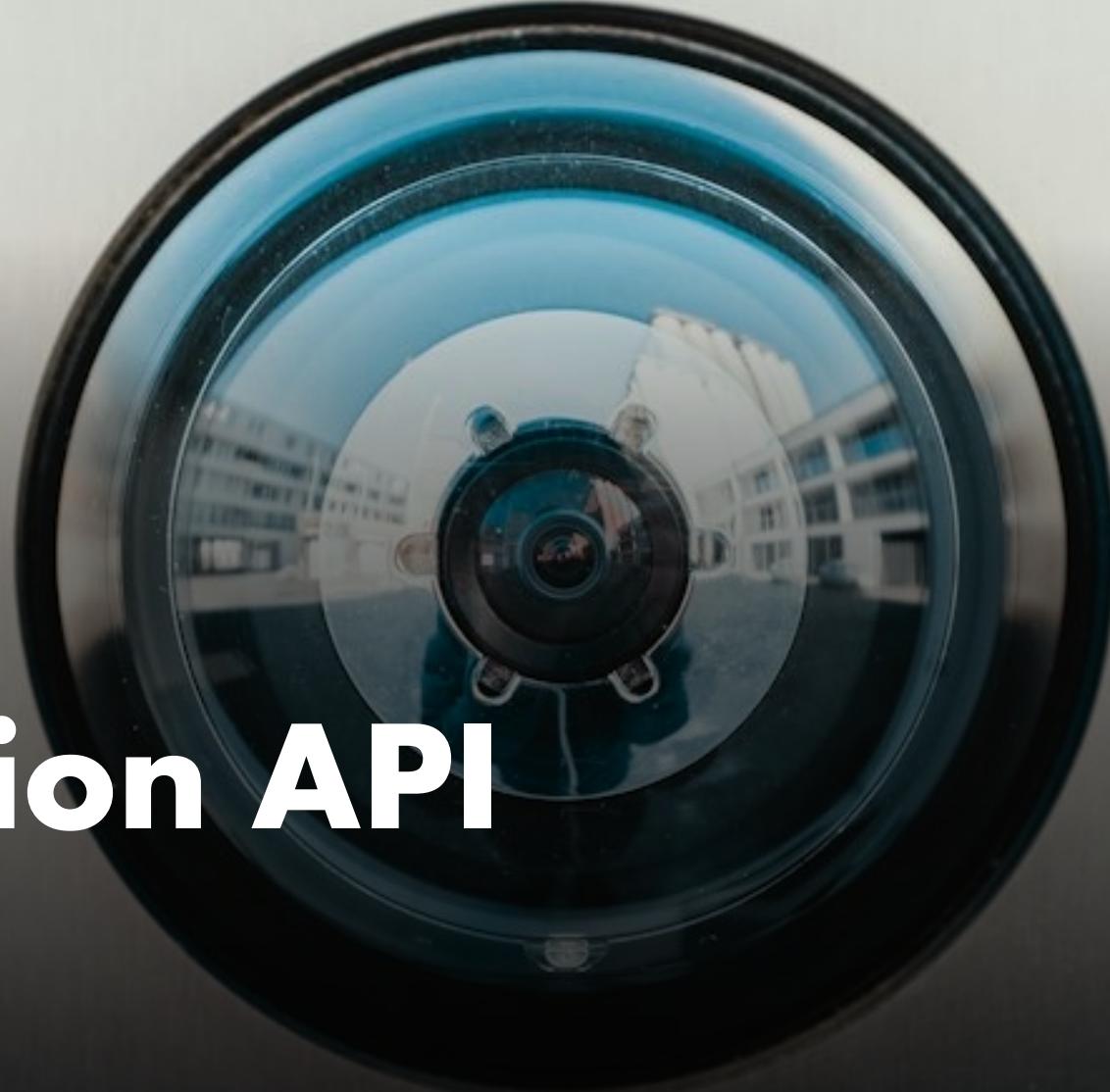
Video - Describe Cake

Voice navigation

Timer Window



Detection API



Shape & Face Detection API

<https://chromestatus.com/features#shape>

For Stream Or Static Image

[Demo](#)



Shape & Face Detection API

Shape Detection API

Face detection Barcode detection Text detection Analyze image file:

This is the shape detection API implementation demo

The following demo allows you to detect shapes, barcodes and faces from an uploaded image.

Refer to the [How to detect human faces \(and other shapes\) in JavaScript](#) on the CKEditor Blog to find out more about the presented function.

Please bear in mind, this mechanism only works in Chrome (Mac, Windows) and it requires this flag: `chrome://flags#enable-experimental-web-platform-features` to be turned on.

Barcode Detection API

```
console.log( await BarcodeDetector.getSupportedFormats())

▼ (11) ['aztec', 'code_128', 'code_39', 'code_93', 'data_matrix', 'ean_13', 'ean_8', 'itf', 'pdf417', 'qr_code', 'upc_a', 'upc_e', 'unknown']
  0: "aztec"
  1: "code_128"
  2: "code_39"
```

Format	Description	Image
aztec	A square two-dimensional matrix following iso24778 and with a square bullseye pattern at their center, thus resembling an Aztec pyramid. Does not require a surrounding blank zone.	
code_128	A linear (one-dimensional), bidirectionally-decodable, self-checking barcode following iso15417 and able to encode all 128 characters of ASCII (hence the naming).	
code_39	A linear (one-dimensional), self-checking barcode following iso16388. It is a discrete and variable-length barcode type.	
code_93	A linear, continuous symbology with a variable length following bcs. It offers a larger information density than Code 128 and the visually similar Code 39. Code 93 is used primarily by Canada Post to encode supplementary delivery information.	
codabar	A linear barcode representing characters 0-9, A-D and symbols - . \$ / +	
data_matrix	An orientation-independent two-dimensional barcode composed of black and white modules arranged in either a square or rectangular pattern following iso16022.	
ean_13	A linear barcode based on the UPC-A standard and defined in iso15420.	
ean_8	A linear barcode defined in iso15420 and derived from EAN-13.	
itf	A continuous, self-checking, bidirectionally-decodable barcode. It will always encode 14 digits.	
pdf417	A continuous two-dimensional barcode symbology format with multiple rows and columns. It's bidirectionally decodable and uses the iso15438 standard.	
qr_code	A two-dimensional barcode that uses the iso18004 standard. The information encoded can be text, URL or other data.	
upc_a	One of the most common linear barcode types and is widely applied to retail in the United States. Defined in iso15420, it represents digits by strips of bars and spaces, each digit being associated to a unique pattern of 2 bars and 2 spaces, both of variable width. UPC-A can encode 12 digits that are uniquely assigned to each trade item, and it's technically a subset of EAN-13 (UPC-A codes are represented in EAN-13 with the first character set to 0).	
upc_e	A variation of UPC-A defined in iso15420, compressing out unnecessary zeros for a more compact barcode.	
unknown	This value is used by the platform to signify that it does not know or specify which barcode format is being detected or supported.	

Barcode Detection API

```
const barcodeDetector = new BarcodeDetector();
const image = document.querySelector("img");

barcodeDetector
  .detect(image)
  .then((barcodes) => {
    let pre = document.createElement("pre");
    pre.innerHTML = JSON.stringify(barcodes, null, 2);
    image.after(pre);
  })
  .catch(console.error);
```



```
[  
  {  
    "boundingBox": {  
      "x": 11.5,  
      "y": 11.5,  
      "width": 175,  
      "height": 175,  
      "top": 11.5,  
      "right": 186.5,  
      "bottom": 186.5,  
      "left": 11.5  
    },  
    "cornerPoints": [  
      {  
        "x": 11.5,  
        "y": 11.5  
      },  
      {  
        "x": 186.5,  
        "y": 11.5  
      },  
      {  
        "x": 186.5,  
        "y": 186.5  
      },  
      {  
        "x": 11.5,  
        "y": 186.5  
      }  
    ],  
    "format": "qr_code",  
    "rawValue": "https://daily-dev-tips.com"  
  }  
]
```

App Ideas

Share recipe

Notification - Clock alert

Video - Describe Cake

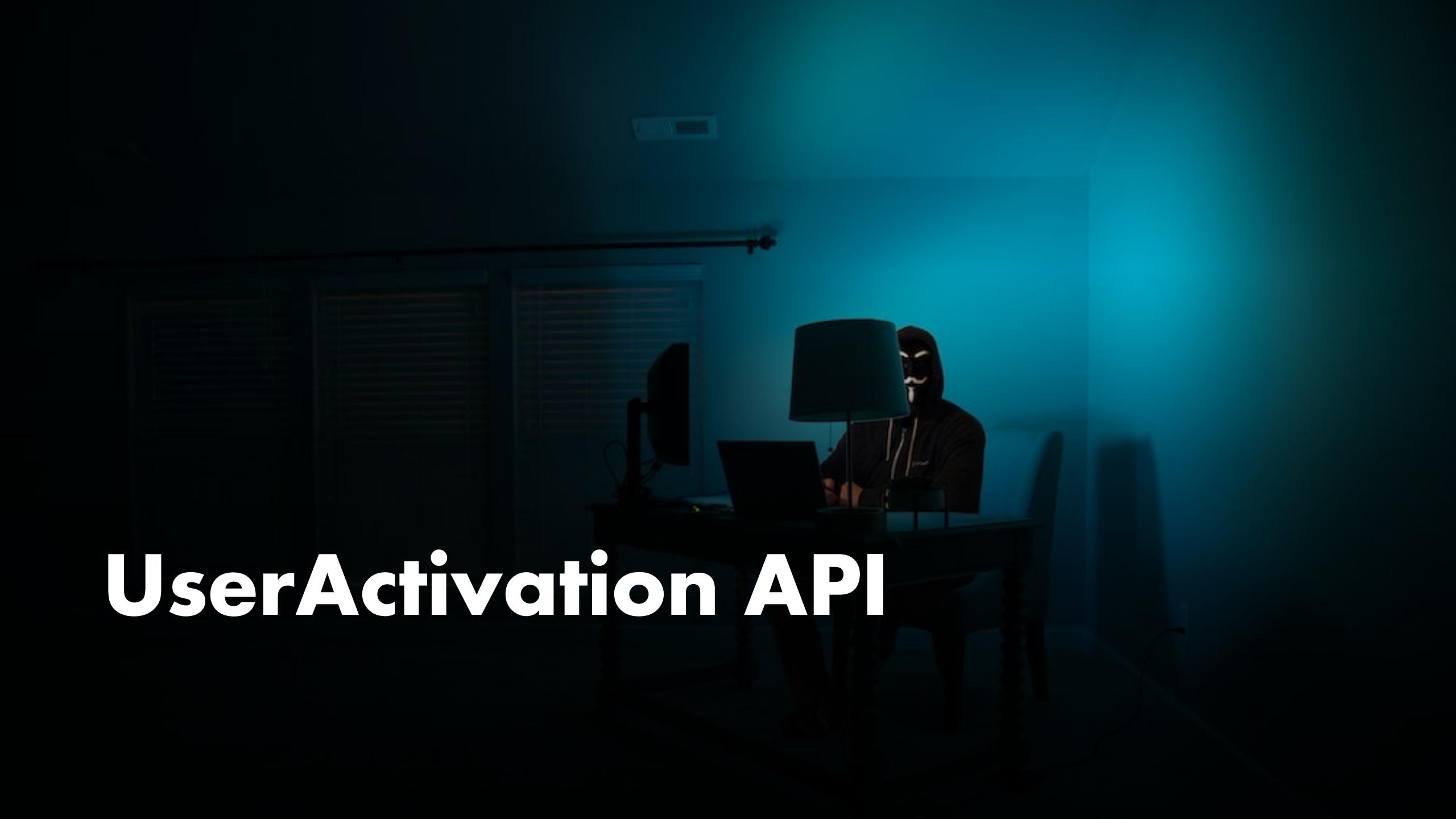
Voice navigation

Timer Window

Recipes scanner



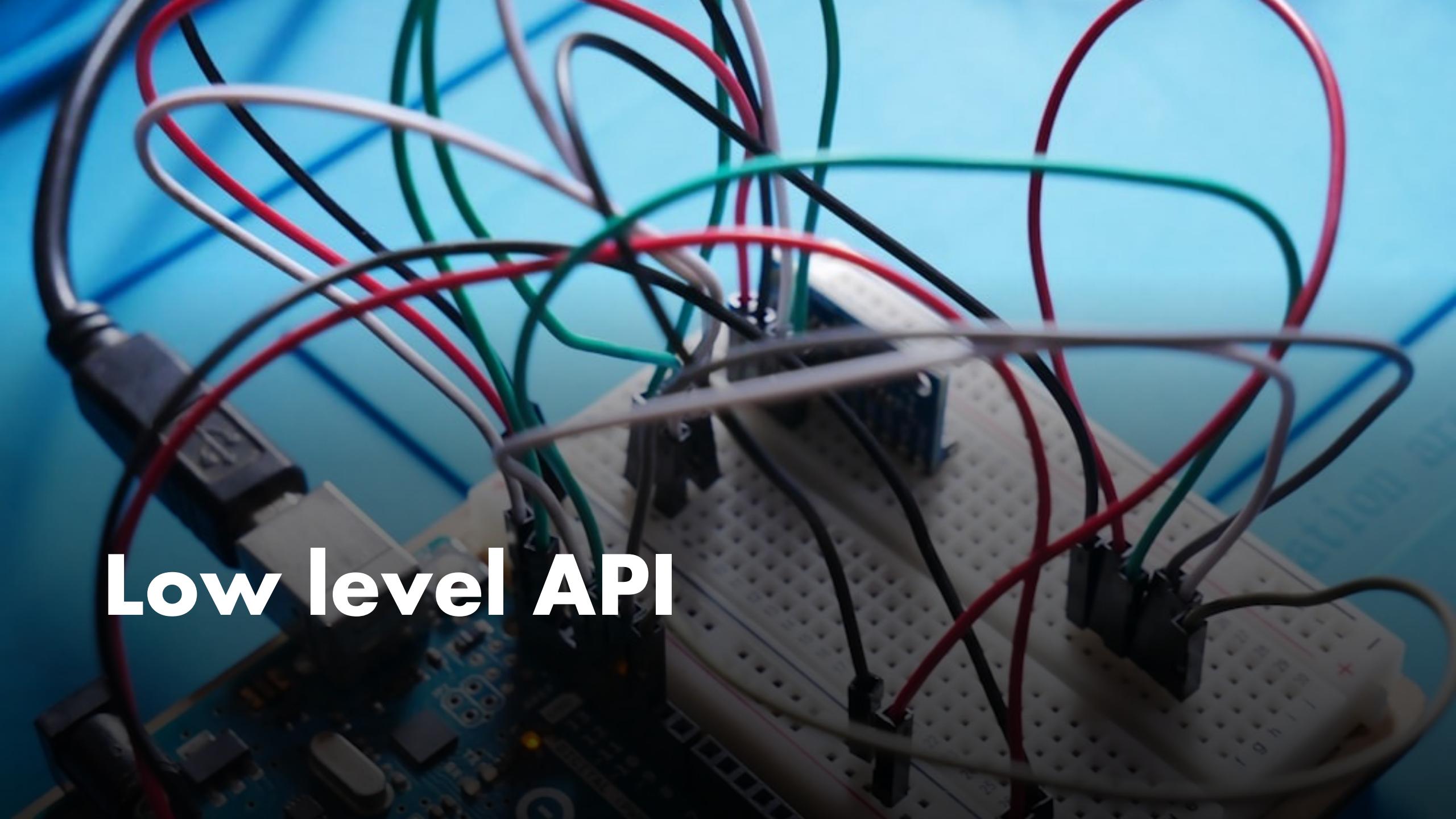
UserActivation API



UserActivation API

```
● ● ●  
if (navigator.userActivation.isActive) {  
    // proceed to request playing media, for example  
}  
  
if (navigator.userActivation.hasBeenActive) {  
    // proceed with auto-playing an animation, for example  
}
```

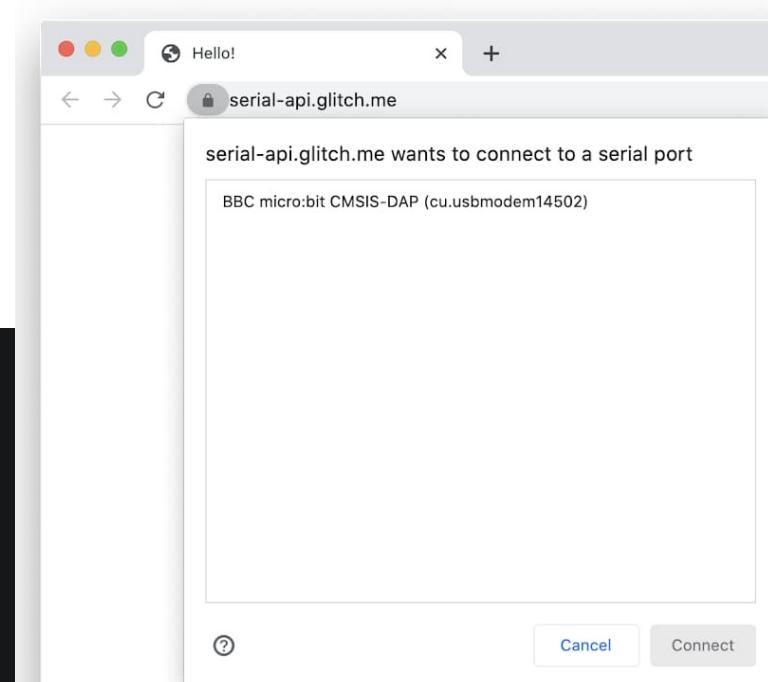




Low level API

WebUSB API + Web Serial API

```
// Filter on devices with the Arduino Uno USB Vendor/Product IDs.  
const filters = [  
  { usbVendorId: 0x2341, usbProductId: 0x0043 },  
  { usbVendorId: 0x2341, usbProductId: 0x0001 }  
];  
  
// Prompt user to select an Arduino Uno device.  
const port = await navigator.serial.requestPort({ filters });  
  
const { usbProductId, usbVendorId } = port.getInfo();
```



WebHID API

Low level API



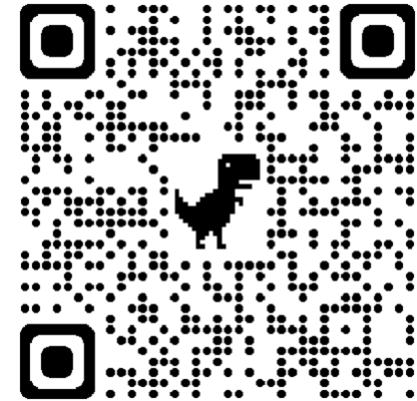
<https://thebitlink.github.io/WebHID-DS4/>

Gamepad API



Gamepad API

```
window.addEventListener( "gamepadconnected", (e) => {
  console.log(
    "Gamepad connected at index %d: %s. %d buttons, %d axes.",
    e.gamepad.index,
    e.gamepad.id,
    e.gamepad.buttons.length,
    e.gamepad.axes.length,
  );
});
```



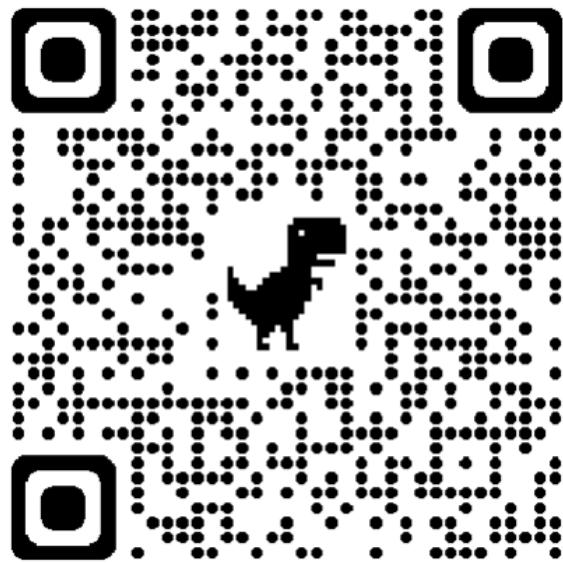
[Demo](#)

[Demo](#)

WakeLock API



WakeLock API



<https://mdn.github.io/dom-examples/screen-wake-lock-api/>

App Ideas

Share recipe

Notification - Clock alert

Video - Describe Cake

Voice navigation

Timer Window

Lock screen on





WebGPU

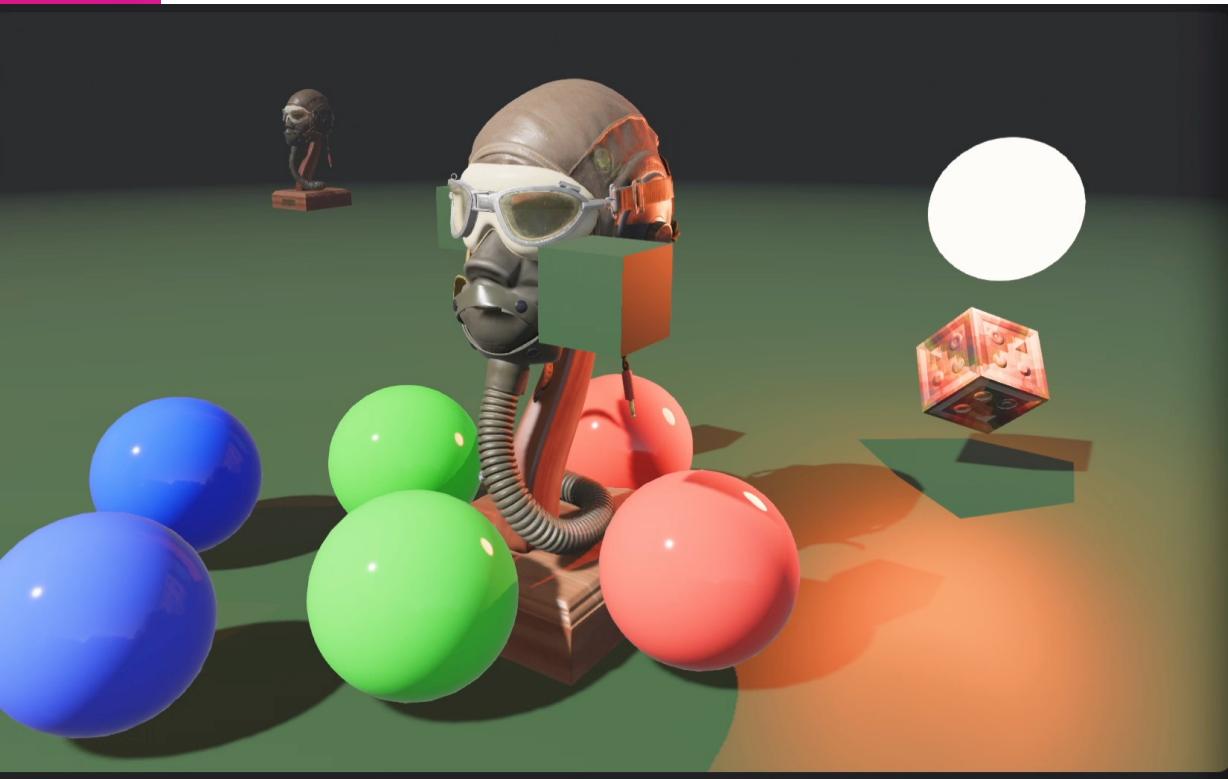
WebGPU



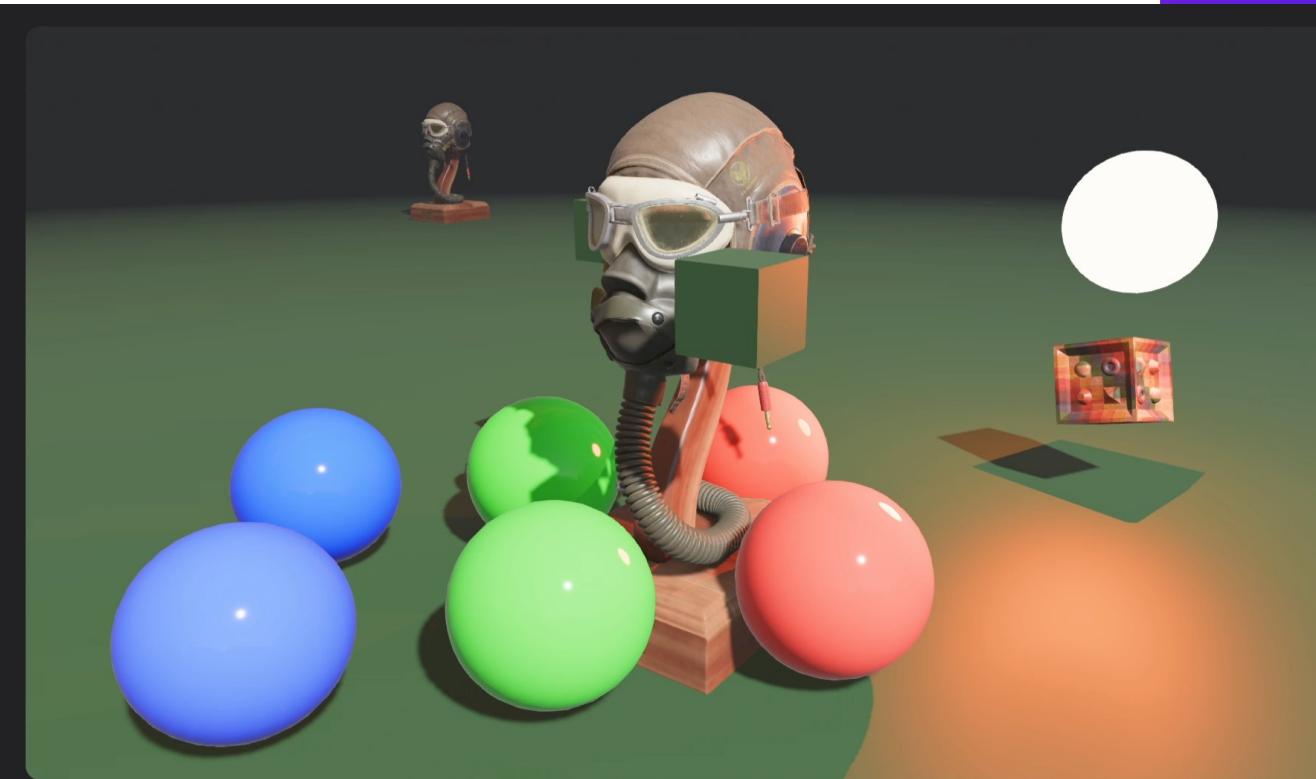
WebGPU



WebGl₂



WebGPU



A man with dark hair and a beard is wearing a white VR headset. He is looking upwards and to the right, with his right hand pointing his index finger towards the camera. He is wearing a blue zip-up hoodie. The background is blurred, showing what appears to be a city street.

WebXR



WebXR Augmented Reality



```
// VR
navigator.xr.requestSession("immersive-vr")
// AR
navigator.xr.requestSession("immersive-ar")
// Wite Device only
navigator.xr.requestSession("inline")
```



WebXR

<model-viewer>

<model-viewer>

[DOCUMENTATION](#) | [EXAMPLES](#)

Loading

Augmented Reality

[WebXR](#)

[AR](#)

[Scene Viewer](#)

[Place on a Wall](#)

[Custom Button](#)

[Transparent Background](#)

Staging & Cameras

Annotations

Lighting & Skybox

Animation

Materials & Scene

Post Process Effects

WebXR Demo

Customize a WebXR Augmented Reality session with HTML, CSS, and JS in Chrome 83+ on Android.

This demonstrates the use of slots, as well as shared and unshared DOM between the 3D and AR modes.

A slot is used here for replacing the default AR button with a custom one - in this case the one recommended by Sceneviewer. This is not the default only because this way localization of the text is left to whatever system you prefer to use. Note the AR button will only be visible on AR-capable devices.

By styling based on the ar-status attribute, you can add DOM that only shows up in certain modes. In this case a CSS animation has been added to prompt the user to move their phone around to help ARCore find their floor so that the object can be placed. User studies show a prompt like this is an important part of guiding users to a good AR experience.

Finally, even complex DOM can easily function in both 3D and AR modes, including interactions via script. In this case a simple carousel of models is demonstrated. Unfortunately none of this DOM content can flow into SceneViewer or QuickLook, as these are native apps. Only through WebXR, now our default AR mode, can this be achieved, as the AR session is still inside of the browser. This also removes the need to redownload the model.

Note that by not specifying an ios-src, the USDZ will instead be auto-generated when the user clicks the AR button on iOS to launch Quick Look.





WebXR

<model-viewer>

Web demo:

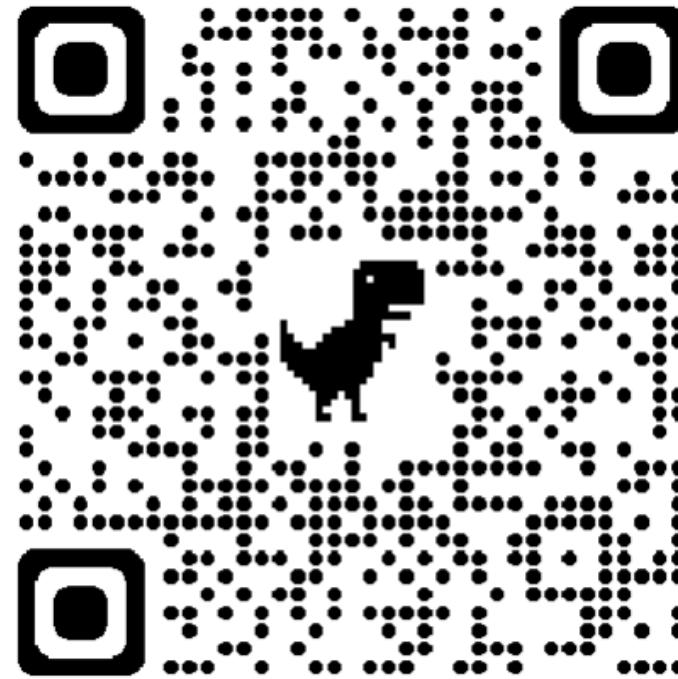
<https://modelviewer.dev/examples/augmentedreality/index.html>

Mobile Demo:

<https://immersive-web.github.io/webxr-samples/>



<model-viewer>



Please put your
phone down.



App Ideas

Share recipe

Notification - Clock alert

Video - Describe Cake

Voice navigation

Timer Window

Lock screen on

Cake Model



Web Audio & Web MIDI



REVERSUM SUMMIT

My browser is a musical instrument?

An introduction to digital sound & Web Audio API

Marik Shnitman / Mobile Developer
WIX Engineering

mariks@wix.com @Marik_Sh linkedin/mariksh github.com/marik22312



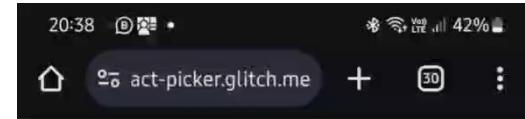
Web Audio & Web MIDI

A white telephone handset with a coiled cord is positioned horizontally across the center of the frame. The handset is white with a black speaker grille at the top. It rests on a blue, textured surface that has a subtle reflection of the handset. The background is a solid dark blue.

Contact Picker API

Contact Picker API

```
● ● ●  
const props = ["name", "email", "tel", "address", "icon"];  
const opts = { multiple: true };  
...  
const contacts = await navigator.contacts.select(props, opts);
```



Contact Picker API Demo

Access to the user's contacts has been a feature of native apps since (almost) the dawn of time. The **Contact Picker API** is a new, on-demand picker that allows users to select an entry or entries from their contact list and share limited details of the selected contact(s) with a website. It allows users to share only what they want, when they want, and makes it easier for users to reach and connect with their friends and family.

Note: This demo requires Chrome 80 or later running on Android M or later to work properly.

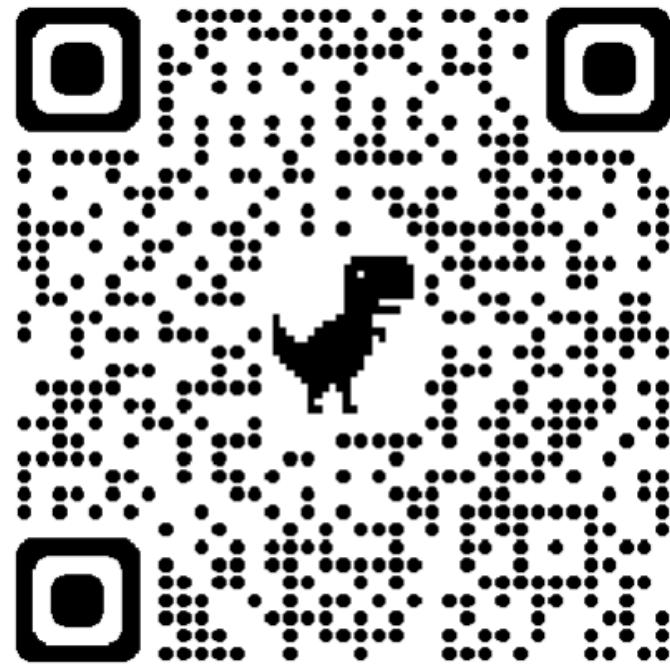
- Multiple results?
- Include name?
- Include email addresses?
- Include telephone numbers?
- Include addresses? (Chrome 84 and later)
- Include icons? (Chrome 84 and later)

This demo **does not** share or upload your contacts. It simply shows them on screen, and no contact data is transferred off this device.

[Open contact picker](#)



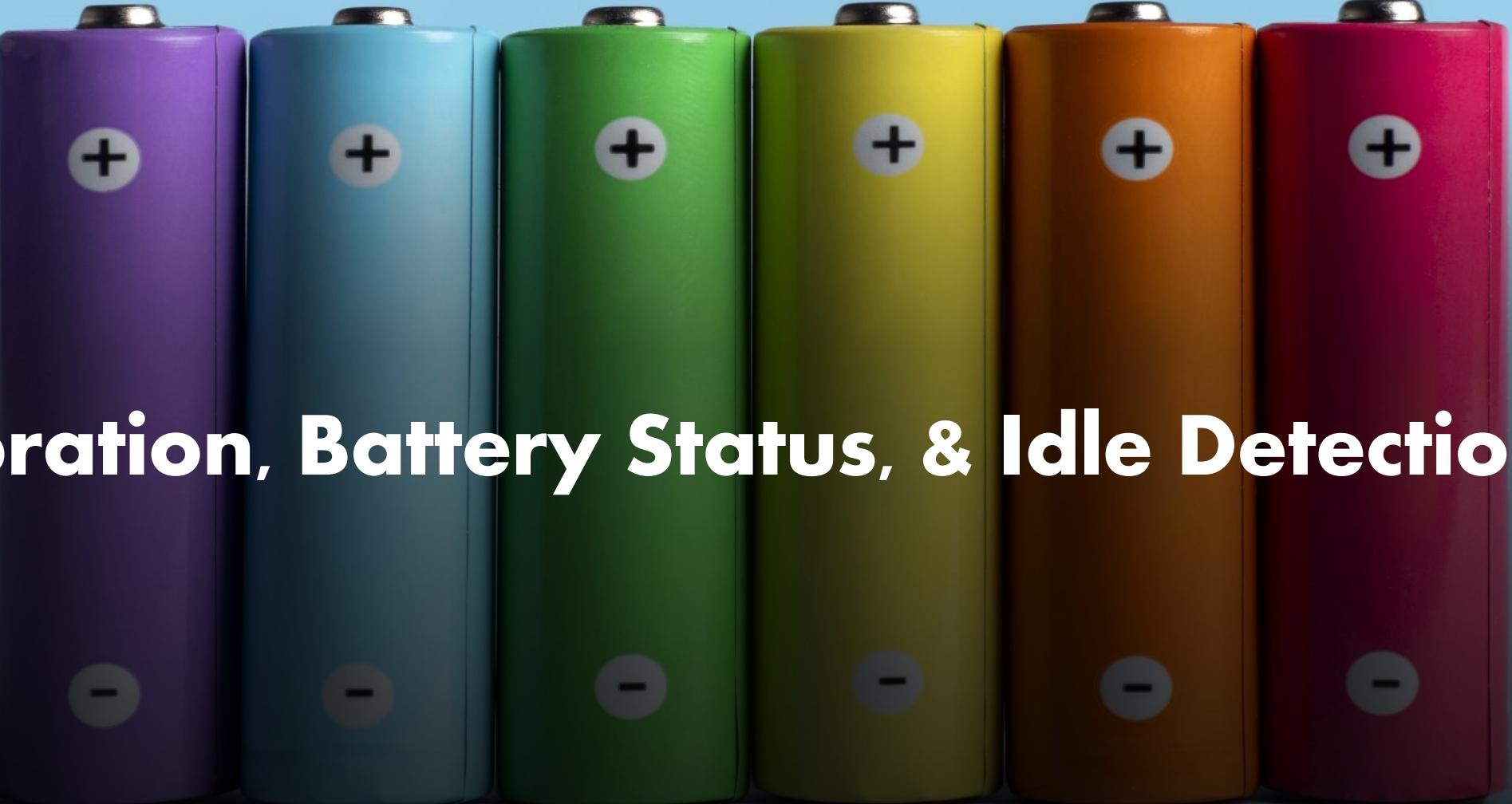
Contact Picker API



Try me!

Please put your
phone down.



A row of six AA batteries is arranged horizontally against a blue-to-black gradient background. The batteries are colored in a spectrum: purple, teal, green, yellow, orange, and red. Each battery has a silver top with a black plus sign (+) and a grey bottom with a black minus sign (-).

Vibration, Battery Status, & Idle Detection

Check it out... ☺



Please put your
phone down.



EyeDropper API



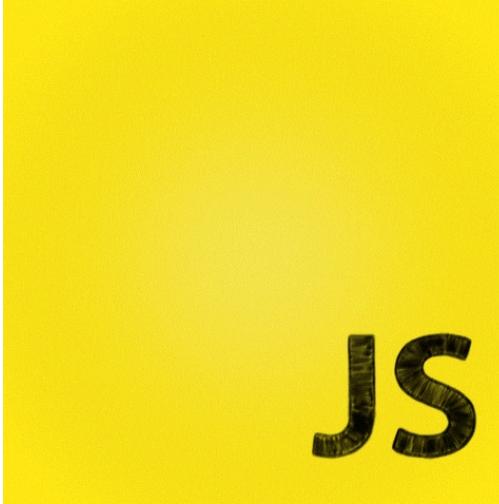
EyeDropper API

```
const eyeDropper = new EyeDropper();

eyeDropper
  .open()
  .then((result) => {
    resultElement.textContent = result.sRGBHex;
    resultElement.style.backgroundColor = result.sRGBHex;
  })
  .catch((e) => {
    resultElement.textContent = e;
  });

```





JS



Mobile and Progressive Web Apps

WebO(ne)T(ime)Password API



WebOTP API



```
...
navigator.credentials.get({
  otp: { transport:['sms'] }
})
...
}).then(otp => {
...

```

[Demo](#)

14:03

Web OTP API Demo

Enter your phone number

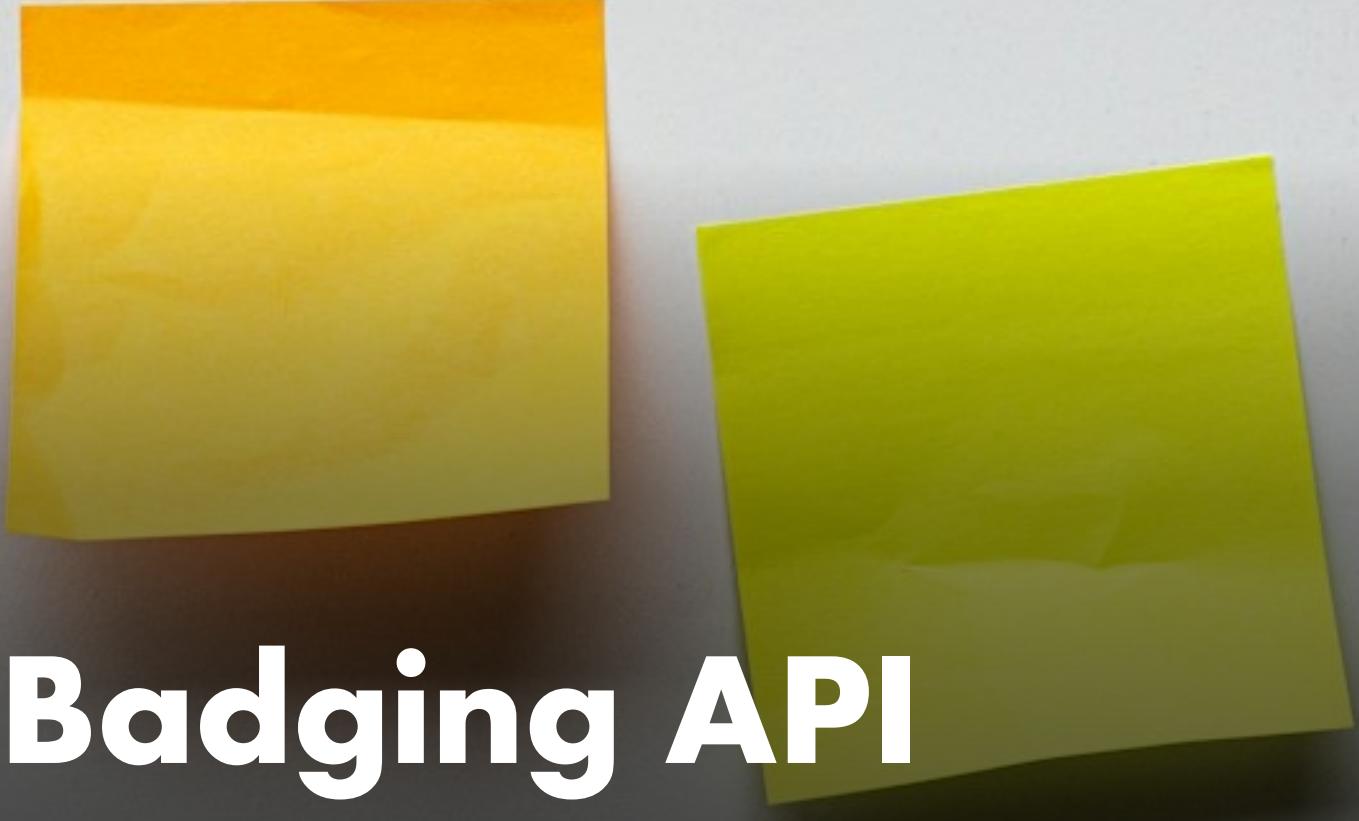
Phone Number *

+ * include the country code

VERIFY

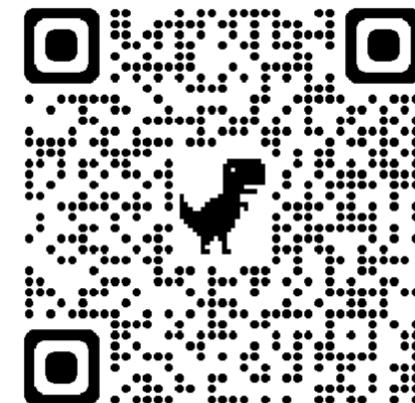
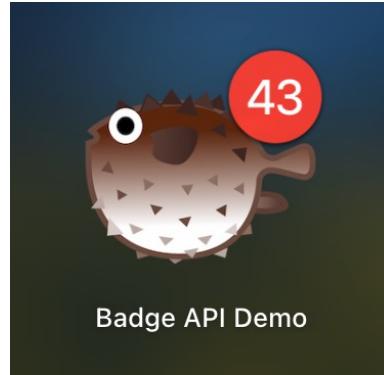
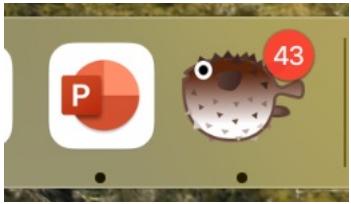
In order to prevent abuse, **please do not share this page's URL in the public place.**

 プライバシー・利用規約

A photograph of two yellow sticky notes on a dark, textured surface. One note is positioned vertically on the left, and the other is positioned horizontally to its right, overlapping slightly.

App Badging API

App Badging API



App Ideas

Share recipe

Notification - Clock alert

Video - Describe Cake

Voice navigation

Timer Window

Lock screen on

Cake Model

New recipes



Customize- install



Customize- install



```
window.addEventListener('beforeinstallprompt', (e) => {
  // Prevent the mini-infobar from appearing on mobile
  e.preventDefault();
  // Stash the event so it can be triggered later.
  deferredPrompt = e;
  // Update UI notify the user they can install the PWA
  showInstallPromotion();
  // Optionally, send analytics event that PWA install promo was shown.
  console.log(`'beforeinstallprompt' event was fired.`);
});
```

```
window.addEventListener('appinstalled', () => {
  // Hide the app-provided install promotion
  hideInstallPromotion();
  // Clear the deferredPrompt so it can be garbage collected
  deferredPrompt = null;
  // Optionally, send analytics event to indicate successful install
  console.log('PWA was installed');
});
```



Web Bluetooth



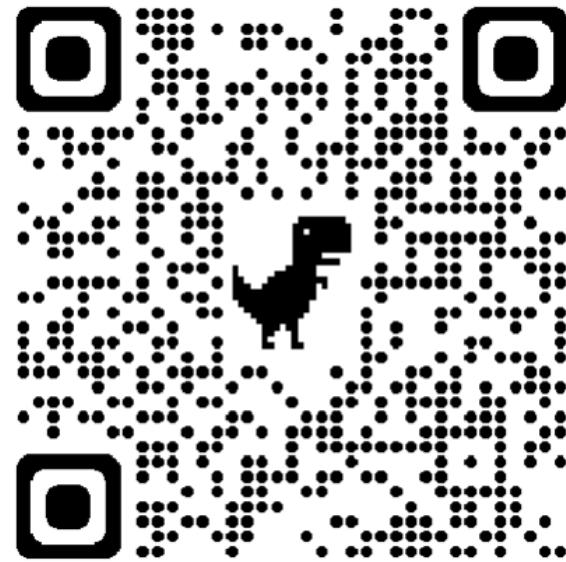
<https://googlechrome.github.io/samples/web-bluetooth/device-info.html>

Web NFC



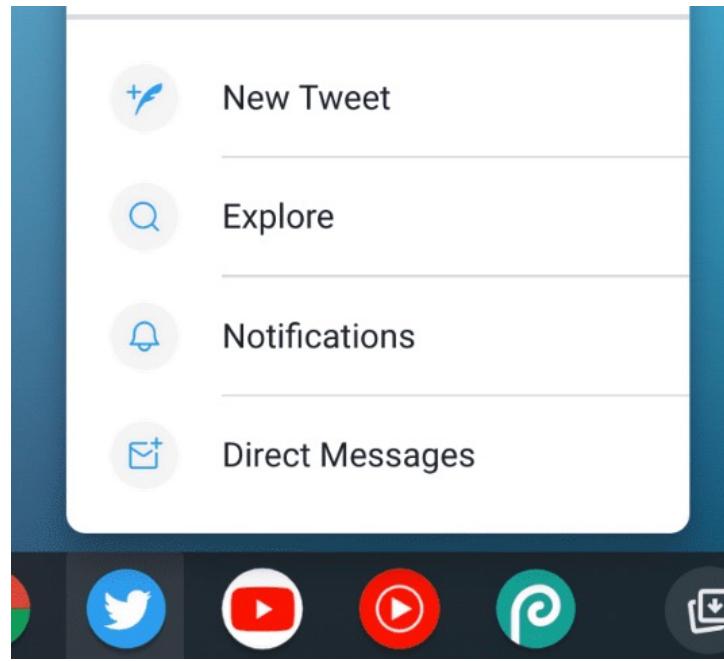
<https://labs-web-nfc.glitch.me/>

Multi-touch API

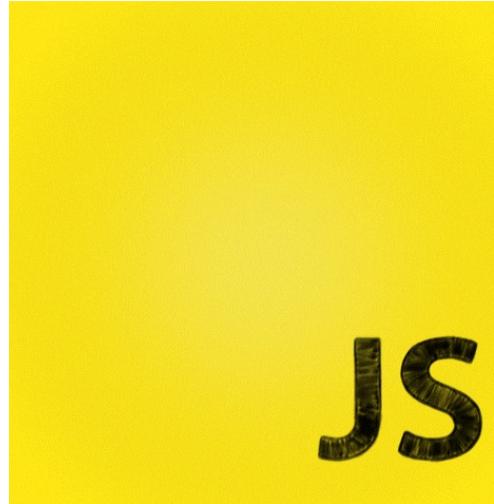


<https://codepen.io/Suniaster/pen/qBmEzOW>

App Shortcuts



```
{  
  "name": "Player FM",  
  "start_url": "https://player.fm?utm_source=homescreen",  
  ...  
  "shortcuts": [  
    {  
      "name": "Open Play Later",  
      "short_name": "Play Later",  
      "description": "View the list of podcasts you saved for  
later",  
      "url": "/play-later?utm_source=homescreen",  
      "icons": [{ "src": "/icons/play-later.png", "sizes": "192x192" }]  
    },  
    {  
      "name": "View Subscriptions",  
      "short_name": "Subscriptions",  
      "description": "View the list of podcasts you listen to",  
      "url": "/subscriptions?utm_source=homescreen",  
      "icons": [{ "src": "/icons/subscriptions.png", "sizes": "192x192" }]  
    }  
  ]  
}
```

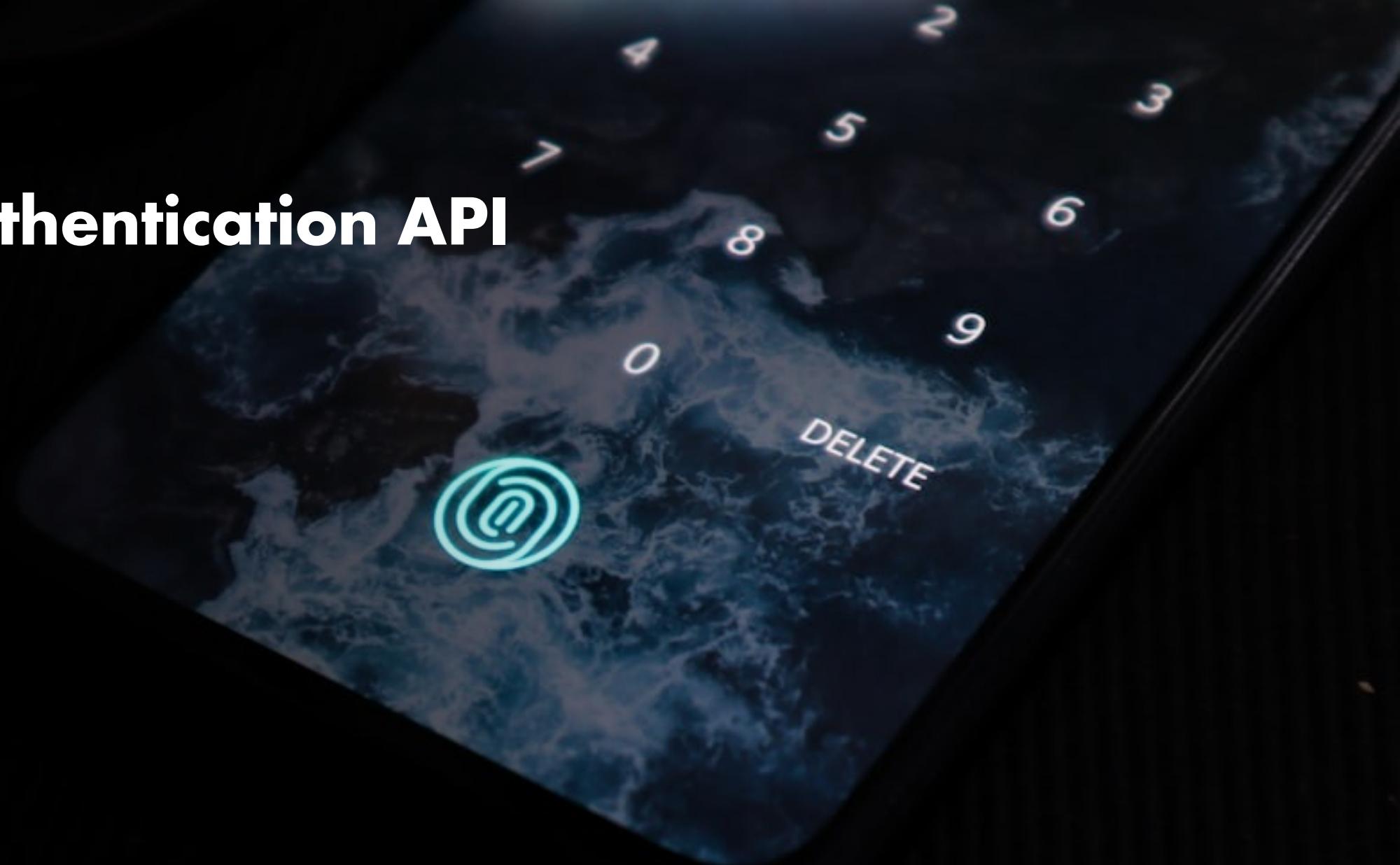


JS

Native Javascript



Web Authentication API



A collection of numerous metal keys of different shapes, sizes, and finishes (silver, gold, brass) are piled together against a solid black background. The keys are oriented in various directions, creating a dense, overlapping texture.

Please stop using password

Web Authentication API

```
● ● ●  
let credential = await navigator.credentials.create({  
  publicKey: {  
    challenge: new Uint8Array([117, 61, 252, 231, 191, 241, ...]),  
    rp: { id: "acme.com", name: "ACME Corporation" },  
    user: {  
      id: new Uint8Array([79, 252, 83, 72, 214, 7, 89, 26]),  
      name: "jamiedoe",  
      displayName: "Jamie Doe"  
    },  
    pubKeyCredParams: [ {type: "public-key", alg: -7} ]  
  }  
});
```

Demo

App Ideas

Share recipe
Notification - Clock alert
Video - Describe Cake
Voice navigation
Timer Window
Lock screen on
Cake Model
New recipes
No password login



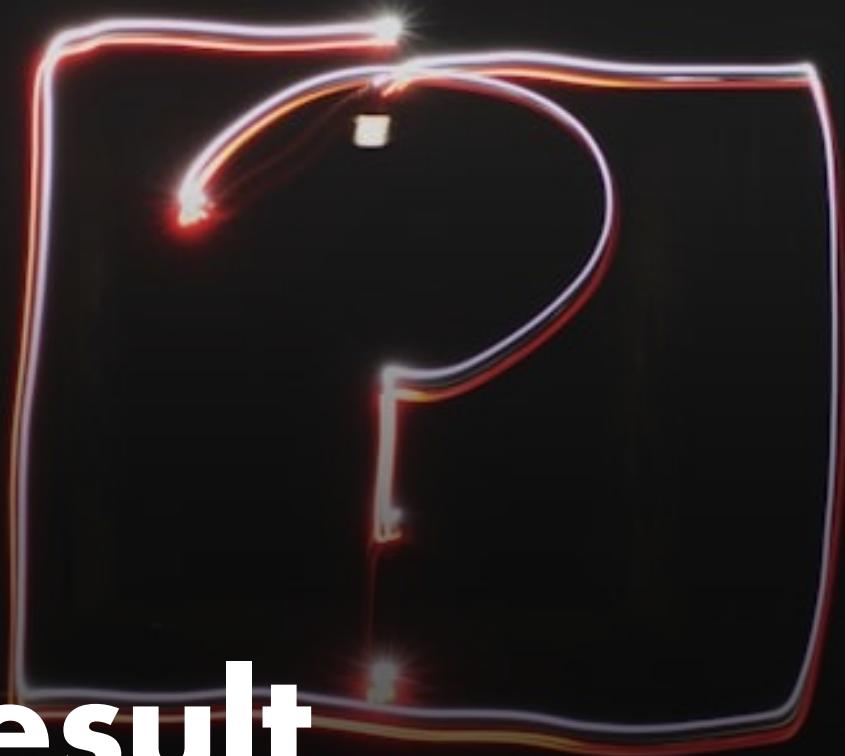


MediaStream Recording API

MediaStream Recording API

Demo

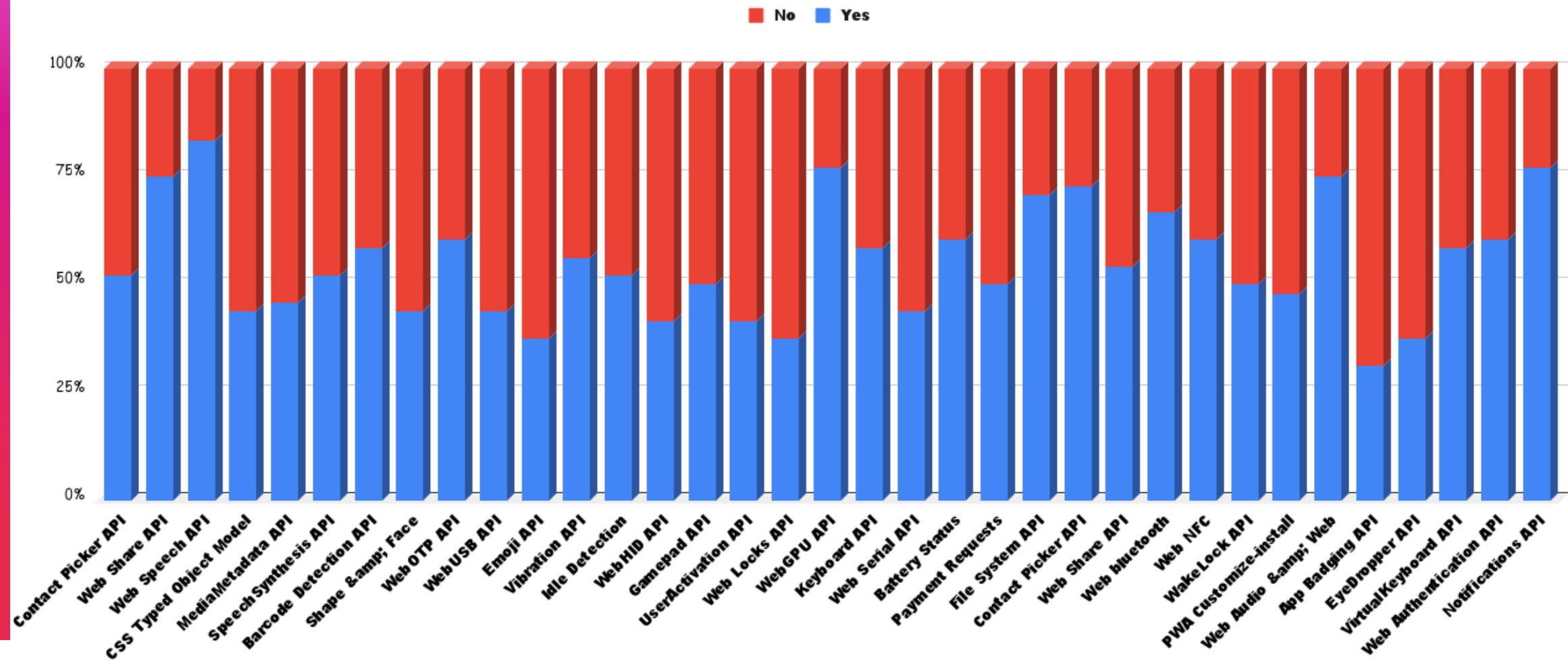
Survey Result



56% Fake

Survey Result

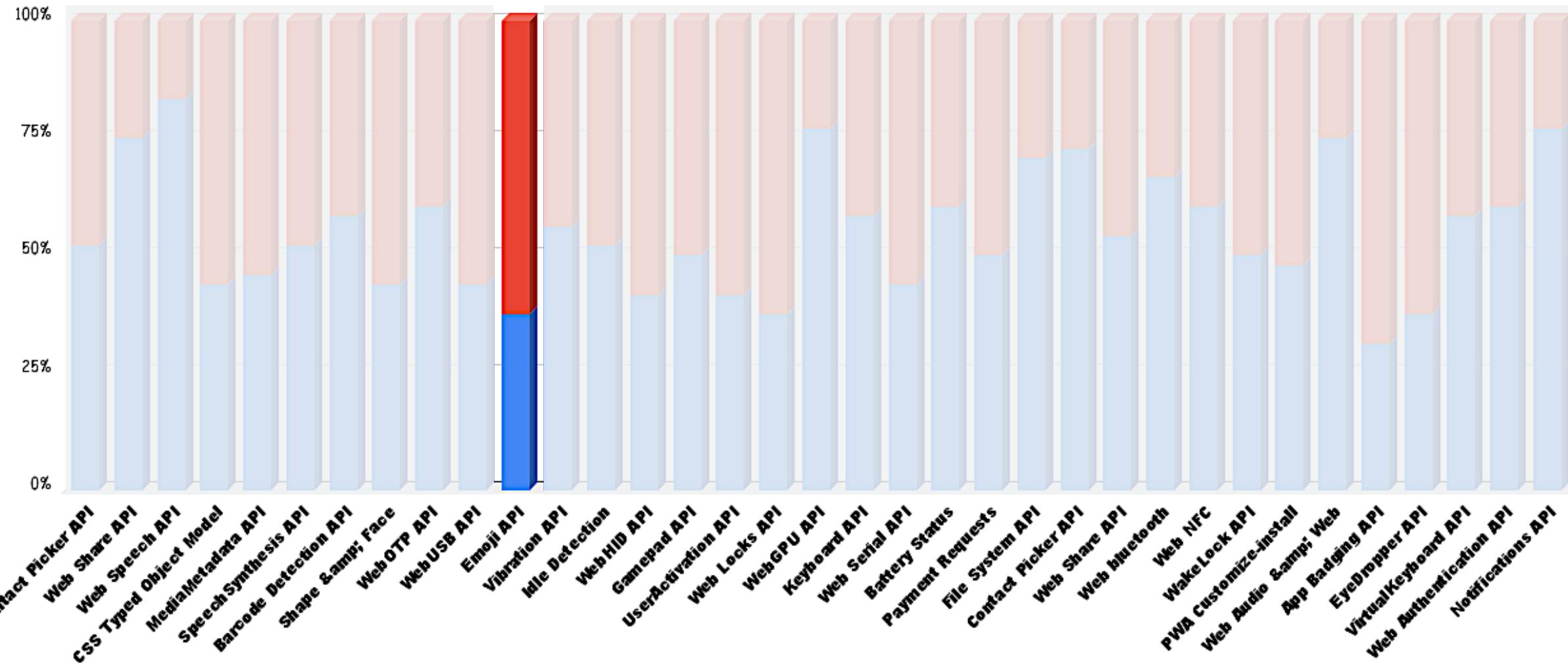
Average Votes



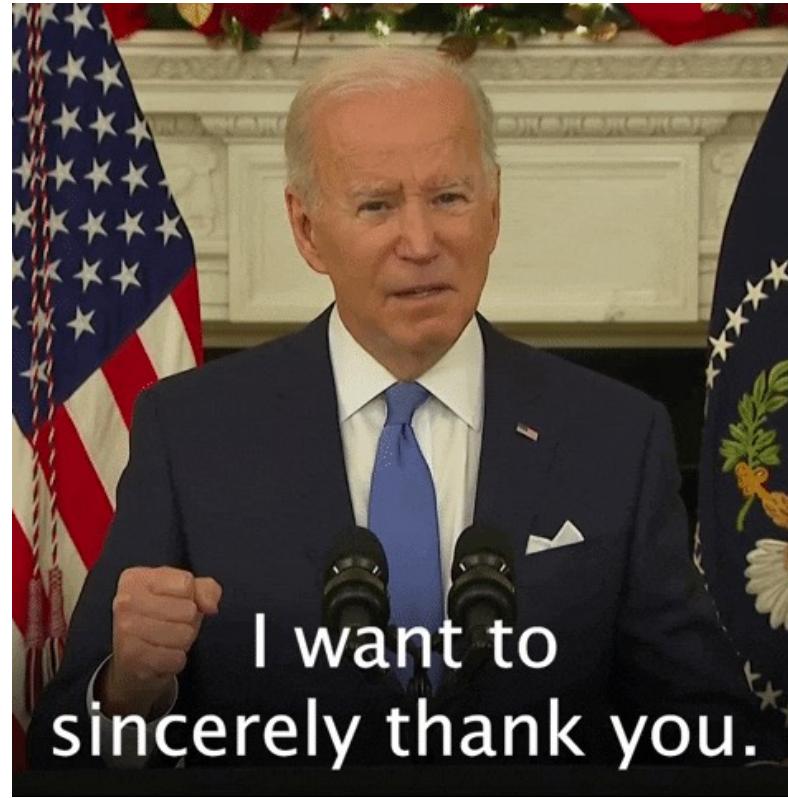
Avarage Votes

Emoji API

No Yes



Thanks !!!



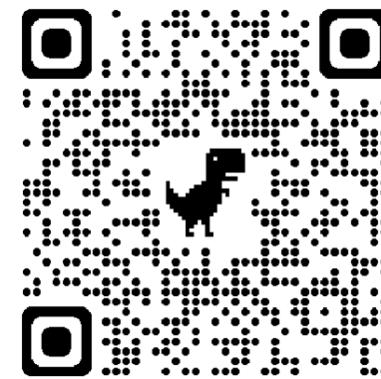
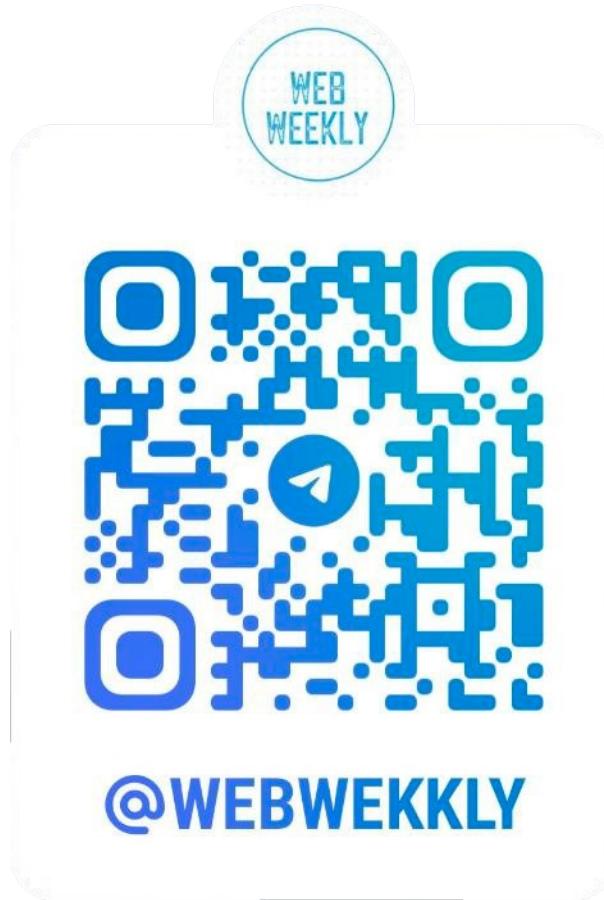
I want to
sincerely thank you.

Bonus

HTML attribute: capture

```
<label for="soundFile">What does your voice sound like?</label>
<input type="file" id="soundFile" capture="user" accept="audio/*" />
</p>
<p>
  <label for="videoFile">Upload a video:</label>
  <input type="file" id="videoFile" capture="environment" accept="video/*" />
</p>
<p>
  <label for="imageFile">Upload a photo of yourself:</label>
  <input type="file" id="imageFile" capture="user" accept="image/*" />
```





<https://yanai101.github.io/webApis.github.io/>