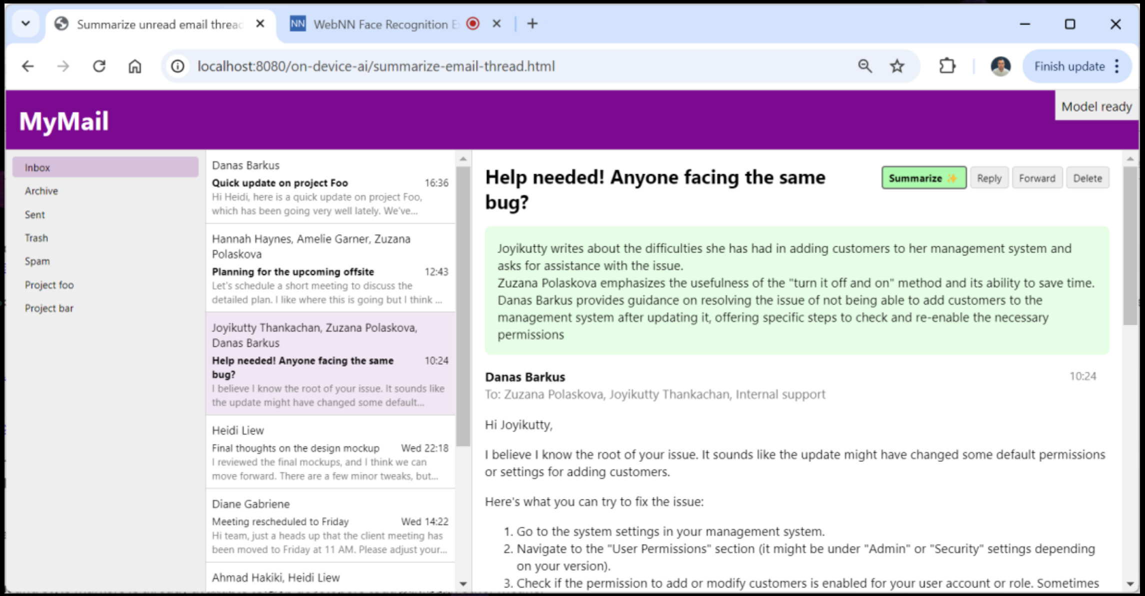
AI on the Web Platform

Early explorations with on-device AI

Patrick Brosset, Smashing Conference, October 2024

Demo time!



Danas Barkus
Quick update on project Foo 16:36
Hi Heidi, here is a quick update on project Foo, which has been going very well lately. We've...

Hannah Haynes, Amelie Garner, Zuzana Polaskova
Planning for the upcoming offsite 12:43
Let's schedule a short meeting to discuss the detailed plan. I like where this is going but I think ...

Joyikutty Thankachan, Zuzana Polaskova, Danas Barkus
Help needed! Anyone facing the same bug? 10:24
I believe I know the root of your issue. It sounds like the update might have changed some default...

Heidi Liew
Final thoughts on the design mockup Wed 22:18
I reviewed the final mockups, and I think we can move forward. There are a few minor tweaks, but...

Diane Gabriene
Meeting rescheduled to Friday Wed 14:22
Hi team, just a heads up that the client meeting has been moved to Friday at 11 AM. Please adjust your...

Ahmad Hakiki, Heidi Liew

Help needed! Anyone facing the same bug?

Joyikutty writes about the difficulties she has had in adding customers to her management system and asks for assistance with the issue.
Zuzana Polaskova emphasizes the usefulness of the "turn it off and on" method and its ability to save time.
Danas Barkus provides guidance on resolving the issue of not being able to add customers to the management system after updating it, offering specific steps to check and re-enable the necessary permissions

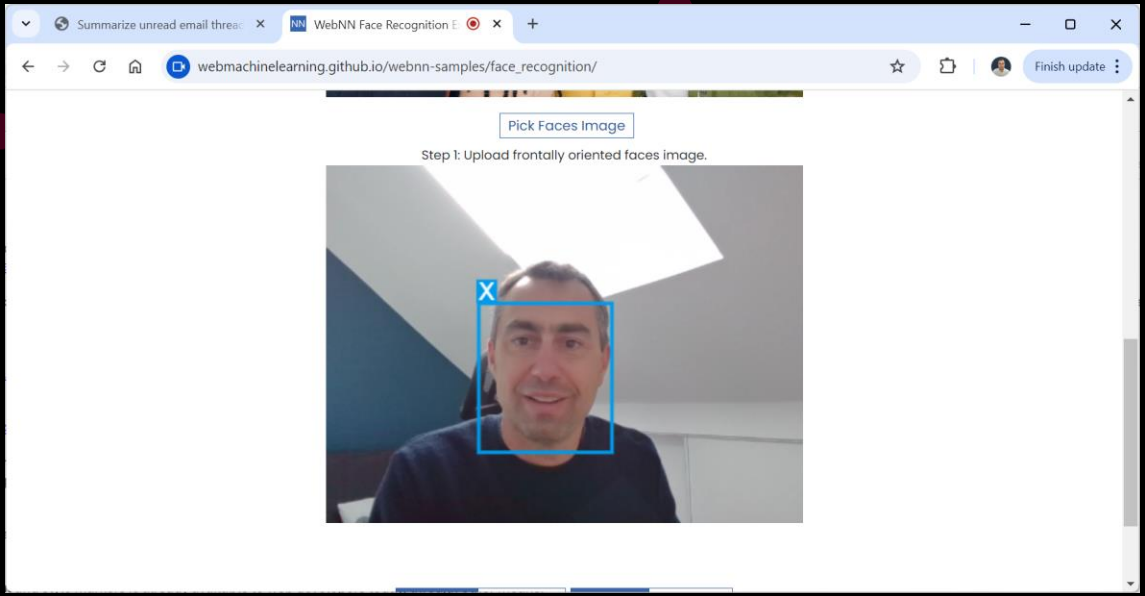
Danas Barkus 10:24
To: Zuzana Polaskova, Joyikutty Thankachan, Internal support

Hi Joyikutty,

I believe I know the root of your issue. It sounds like the update might have changed some default permissions or settings for adding customers.

Here's what you can try to fix the issue:

1. Go to the system settings in your management system.
2. Navigate to the "User Permissions" section (it might be under "Admin" or "Security" settings depending on your version).
3. Check if the permission to add or modify customers is enabled for your user account or role. Sometimes


Summarize unread email threa
WebNN Face Recognition E
webmachinelearning.github.io/webnn-samples/face_recognition/
Finish update
Pick Faces Image
X

Step 1: Upload frontally oriented faces image.

What if?

- What if this could run on users' devices?
    - No privacy concerns 🔏
    - Lower latency 🛜
    - No cloud AI cost 💵
    - Offline support ✈️

What if?

- What if webpages could use an API to do this directly?
    - No framework to use
    - No model to download
    - Simple usage

Wait, let's take a step back

- The web and AI

Wait, let’s take a step back

- The web and AI
- The web **platform** and AI?

It's already happening

"Bring Your Own Model" - BYOM

- WebGL
- WebGPU
- WebNN

- TensorFlow Lite
- ONNX Runtime Web

It's already happening

Google's "built-in" Prompt() API

- Browser-provided model
- Simple API

- For experimentation only ⚠️

Our interest

- We want the web to succeed
- Devs want the web to be at par with native
- We want to understand user's needs first
- Not just Language Models
- We want to make it work with the web

You can help 🙏

- Ideas? Feedback? Use cases? Thoughts?
- Come find me during the conference
- Message me:
  - Mastodon: @patrickbrosset@mas.to
  - Email: patrick.brosset@microsoft.com
- Anonymous form: aka.ms/web-ai-feedback

Microsoft Edge

Come chat about:

- On-device AI for the web
  Ideas/use cases? aka.ms/web-ai-feedback
- Progressive Web Apps and PWA Builder
- Web Platform stuff

On-device AI for the web

What if you could run AI models on a web page?

🔏 Privacy-preserving
💵 No cloud AI cost

🛜 Low latency
✈️ Offline support

📢 Ideas/use cases?
aka.ms/web-ai-feedback

You already can! WebGL, WebGPU, WebNN, Experimental Prompt() API