

Related Roadmaps

- ✓ Frontend Roadmap
- ✓ JavaScript Roadmap

Frontend Performance

Find the detailed version of this checklist
With details on how to implement these

<https://roadmap.sh>

High Priority

- Minimize number of iframes
- Minified CSS - Remove comments, whitespaces etc
- CSS files are non-blocking
- Inline the Critical CSS (above the fold CSS)
- Avoid the embedded / inline CSS
- Analyse stylesheets complexity
- Compress your images / keep the image count low
- Choose your image format appropriately
- Minify your JavaScript
- Non Blocking JavaScript: Use async / defer
- Use HTTPs on your website
- Keep your page weight < 1500 KB (ideally < 500 kb)
- Keep your page load time < 3 seconds
- Keep the Time To First Byte < 1.3 seconds
- Minimize HTTP Requests
- Serve files from the same protocol
- Avoid requesting unreachable files (404)
- Set HTTP cache headers properly
- GZIP / Brotli compression is enabled

Medium Priority

- Minified HTML - Remove comments and whitespaces
- Use Content Delivery Network
- Prefer using vector image rather than bitmap images
- Set width and height attributes on images (aspect ratio)
- Avoid using Base64 images
- Offscreen images are loaded lazily
- Ensure to serve images that are close to your display size
- Avoid multiple inline JavaScript snippets <script>
- Keep your dependencies up to date
- Check for performance problems in your JavaScript files
- Service Workers for caching / performing heavy tasks
- Cookie size should be less than 4096 bytes
- Keep the cookie count less than 20

Low Priority

- Pre-load URLs where possible
- Concatenate CSS into a single file
- Remove unused CSS
- Use WOFF2 font format
- Use preconnect to load your fonts faster
- Keep the web font size under 300kb
- Prevent Flash or Invisible Text
- Keep an eye on the size of dependencies

Performance Tools

PageSpeed Insights

Lighthouse

WebPageTest

Chrome DevTools

Bundlephobia

Squoosh.app

More Resources

Framework Specific Guides

Recommended Talks / Guides

Continue Learning with following relevant tracks

Frontend Roadmap

Backend Roadmap