**Report**

**Topic:-How to improve suscom.in website**

Angular

Angular JS was developed in 2009 by Miko Hevery at Brat Tech LLC, as front-end web development application. Based on JavaScript, Angular JS is an open-source framework built on the concept of connecting the software components and creating user interfaces. The framework is currently maintained by Google.

Angular 5

Angular 5 is the best for the improvement of suscom. Angular 5 has been released in 1 November 2018. It came with a whole bunch of additional and new features, service improvements and bug fixes.

Angular 5 is faster, lighter and easier. It is built with the purpose to create faster performance applications that are smaller in size and easier to develop.

Bug fixes and a bundle of performance improvement features are ready to boost its performance.

The key features of Angular 5.0 are as follows:

* Simpler Progressive Web Applications
* Material Design
* Build optimizer
* Angular Universal API and DOM
* Improved Compiler and Typescript
* CLI v1.5
* Router Hooks
* Number, date and currency pipes update

Simpler Progressive Web Applications

Progressive web applications are generating much hype these days.

Not only that, with Angular 5.0 it is possible to get the features of native mobile applications with the mobile web apps such as push notifications and offline experience.

This is made possible as Angular can create code and configuration with Angular-CLI on its own.

Material Design Components

Another major update in Angular 5.0 is that [Material Design components](https://material.angular.io/) are now made compatible with server-side rendering. However, this feature has not been released for now.

Built Optimizer

Angular 5.0 comes with build optimizer tool. It makes the application lighter and faster by removing unnecessary runtime code as well as unnecessary additional parts. Ultimately the size of the JavaScript decreases, and application becomes much faster.

Angular Universal State Transfer API and DOM

Angular 5.0 comes with Angular Universal State Transfer API and DOM support for sharing code between server and client-side versions of an application.

[Angular Universal](https://universal.angular.io/) renders the application on the server side. This increases the perceived performance of the application.

Improved compiler and Typescript

Typescript was introduced in Angular 2.0 and along with the upgrades in Angular newer versions of typescript were also introduced.

The Angular compiler for Angular 5.0 comes with typescript 2.3 that makes the rebuilt super-fast.

CLI v1.5

By default, all the projects on Angular 5 are now generated by CLI v1.5.

Router Hooks

Developers can now track the router cycles from the start of running guards till the activation is completed.

Number, date and currency pipes update

Earlier Angular was dependant on the browsers to get the number, date and currency format. This resulted in inconsistency for users. But now in Angular 5.0, international number, date and currency have been standardized.

**To improve performance of site**

First Contentful Paint

To speed up First Contentful Paint, speed up the download time of resources or do less work that blocks the browser from rendering DOM content.

* Minimize the number of render-blocking external stylesheets and scripts upon which the page depends. See [Render-Blocking CSS](https://developers.google.com/web/fundamentals/performance/critical-rendering-path/render-blocking-css) and [Loading Third-Party JavaScript](https://developers.google.com/web/fundamentals/performance/optimizing-content-efficiency/loading-third-party-javascript/).
* Use [HTTP Caching](https://developers.google.com/web/fundamentals/performance/get-started/httpcaching-6) to speed up repeat visits.
* Minify and compress text-based assets to speed up their download time.

Speed Index

To lower your Speed Index score, you need to optimize your page to visually load faster. Two good starting places are:

* [Optimizing Content Efficiency](https://developers.google.com/web/fundamentals/performance/optimizing-content-efficiency/).
* [Optimizing the Critical Rendering Path](https://developers.google.com/web/fundamentals/performance/critical-rendering-path/).

Time to Interactive

To improve your TTI score, defer or remove unnecessary JavaScript work that occurs during page load. See [Optimize JavaScript Bootup](https://developers.google.com/web/fundamentals/performance/optimizing-content-efficiency/javascript-startup-optimization/) and [Reduce JavaScript Payloads with Tree Shaking](https://developers.google.com/web/fundamentals/performance/optimizing-javascript/tree-shaking/), and [Reduce JavaScript Payloads with Code Splitting](https://developers.google.com/web/fundamentals/performance/optimizing-javascript/code-splitting/).

# **Improve suscom.in Site's Ranking (SEO)**

## **1. Publish Relevant Content**



Quality content is the number one driver of your search engine rankings and there is no substitute for great content. Quality content created specifically for your intended user increases site traffic, which improves your site’s authority and relevance. Fine-tune your [web writing skills](https://www.mtu.edu/umc/services/digital/writing/index.html).

Identify and target a **keyword phrase** for each page. Think about how your reader might search for that specific page. Then, repeat this phrase several times throughout the page—once or twice in the opening and closing paragraphs, and two to four more times throughout the remaining content.

Don’t forget to use **bold**, italics, [heading tags](https://www.mtu.edu/accessibility/training/web/headings/index.html) (especially an H1), and other emphasis tags to highlight these keyword phrases—but don’t overdo it. You still want your language and writing style to read naturally. Never sacrifice good writing for SEO. The best pages are written for the **user**, not for the search engine.

## **2. Update Your Content Regularly**

You’ve probably noticed that we feel pretty strongly about content. Search engines do, too. Regularly updated content is viewed as one of the best indicators of a site’s **relevancy**, so be sure to keep it fresh.

## **3. Metadata**

When designing your website, each page contains a space between the <head> tags to insert metadata, or information about the contents of your page. If you have a CMS site, the UMC web team will have pre-populated this data for you:

* **Title Metadata**Title metadata is responsible for the page titles displayed at the top of a browser window and as the headline within search engine results. It is the most important metadata on your page. For those with a CMS website, the web team has developed an automated system for creating the meta title for each webpage.
* **Description Metadata**Description metadata is the textual description that a browser may use in your page search return.

Think of it as your site’s window display—a concise and appealing description of what is contained within, with the goal of encouraging people to enter.

A good meta description will typically contain two full sentences.

* **Keyword Metadata**Keyword metadata is rarely if ever used to tabulate search engine rankings. However, you should already know your keyword phrases, so it doesn't hurt to add them into your keyword metadata. You’ll want to include a variety of phrases. As a general rule, try to keep it to about 6-8 phrases with each phrase consisting of 1-4 words. A great example would be "computer science degree."

## **4. Have a link-worthy site**

Focus on creating relevant links within the text. Instead of having "click here" links, try writing out the name of the destination. "Click here" has **no search engine value** beyond the attached URL, whereas “Michigan Tech Enterprise Program” is rich with keywords and will improve your search engine rankings as well as the ranking of the page you are linking to. Always use [descriptive links](https://www.mtu.edu/accessibility/training/web/link-text/index.html) by linking keywords—it not only improves search engine optimization, but also adds value to your readers, including those with disabilities or who are using screen readers.

## **5. Use alt tags**

Always describe your visual and video media using [alt tags](https://www.mtu.edu/accessibility/training/images/index.html), or alternative text descriptions. They allow search engines to locate your page, which is crucial—especially for those who use text-only browsers or screen readers.

#### [Progressive Web Apps:](https://developers.google.com/web/fundamentals/codelabs/your-first-pwapp/)

#### Some key feature of Progressive web apps are given below:-

**Responsive** — Fits any form factor: desktop, mobile, tablet, or whatever is next.

**Connectivity independent** — Enhanced with service workers to work offline or on low-quality networks.

**Installable** — Allows users to add apps they find most useful to their home screen without the hassle of an app store.

**Linkable** — Easily share the application via URL, does not require complex installation.