

**Digital Strategy Study and Analysis  
ICPC Social Media Strategy, SEO  
Strategy, and Reputation Analysis**

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# Executive Summary

The purpose of this report was to determine how the International Collegiate Programming Competition (ICPC) organization currently handled their digital strategy and steps they could take to further increase their social media presence and online reputation. This report is divided into three sections. The first section is an analysis on ICPC's current social media strategy on platforms such as Facebook, Twitter, and YouTube, where their current strategy was examined and suggestions were made for how ICPC could generate engaging social media content that achieved their stated goals of showing off their competitors, promoting their sponsors, and highlighting the work done by their staff. The second section provides an audit of ICPC's SEO strategy, which examines how search engine platforms view their page and it provides recommendations for how ICPC can improve their SEO ranking. The third section is a reputation analysis of ICPC's web presence, which was conducted by monitoring the first 30 results that came up when doing a signed-out Google search of the term "ICPC News." This section also includes an analysis of 15,000 ICPC's Twitter followers brought together through a Twitter API. A chart was made of who ICPC's most influential Twitter followers were and a strategy was developed on how ICPC should engage with these followers so those influential followers promote ICPC's content to a "secondary audience," allowing that content to be exposed to a larger digital audience. Each section contains suggestions that ICPC can follow to improve their digital strategy and ensure their content is meaningful and engaging to their online audience, which will make it more likely for their exposure to spread.

# ICPC Social Media Strategy

## Twitter

ICPC's Twitter feed mainly consists of photos, videos, links to websites, and certain motivational quotes with hashtags. Most of what you promote on Twitter has to do with their events and those who are participating in their annual programming competitions. Teams of programmers who have been selected to compete in their summer tournament are frequently highlighted in their Twitter posts, and those posts get a high level of engagement. The posts that gets ICPC the most engagement cleverly use hashtags to expose their content to a wider audience beyond those who follow them, use photos to highlight the members of a team, or convey extremely important information about their events. Additionally, ICPC's tweets that receive the most engagement tend to go out in the afternoon rather than in the morning.

Based on the data listed above, ICPC's Twitter strategy should primarily be used to showcase the individuals participating in their competitions and commit to using elements such as hashtags and photos to drive up engagement. ICPC should commit to making a showcase of their teams the central aspect of their digital strategy, because with the exception of a few important announcements, these tweets were the ones Twitter users engaged with the most through liking, retweeting, and replying. ICPC also cleverly uses hashtags in certain tweets and is quick to jump in on Twitter trends such as #MondayMotivation. This type of content is engaging with a number of different users, and ICPC should use this strategy more often to get Twitter engagement. Finally, ICPC should cut back on tweets that are simply just status reports without any additional information (no photos, videos etc). Tweets that don't have photos, go directly to a link, or simply lack context or a message do not generate much engagement among ICPC's followers, and they should cut back or eliminate those types of tweets.

## Facebook

The types of content that ICPC posts on Facebook consist mainly of photos, videos, links, and status updates. Posts are published on a fairly regular basis, mostly in the morning and the content of these posts usually highlights of teams, motivational posts, and links to sign up sheets and videos of previous competitions. The Facebook posts that tend to be the most engaging to ICPC's followers are the ones that introduce members of a team, contain a link to YouTube or cleverly use hashtags. These posts tend to get medium and high levels of engagement from ICPC's followers, such as likes, comments, and shares.

ICPC's Facebook strategy should focus on posting photographs and sharing videos from other platforms, and these photos and videos should highlight their programmers and the work they have done. ICPC's Facebook posts should give viewers an opportunity to directly interact with the post (posts that will draw a lot of comments etc) and their Facebook posts should often use hashtags and catch on to trends to maximize the amount of people that could see this content. ICPC can reach their stated goals through sponsoring posts by focusing on staffers and those

who sponsor the event, since most of their promoted posts tended not to draw as high a level of engagement than their organic content.

## **YouTube**

ICPC's YouTube channel is made up of challenges, interviews, composites, competitions, daily highlights, and other videos displaying highlighted aspects of competition. The composite videos were longer, and tended to get a high number of likes, subscriptions, and comments from those who chose to engage with ICPC's longform video content. Some of the most popular videos ICPC posts to YouTube are competition videos and interviews with team members, which both tend to get more clicks, likes, and subscriptions. The interview videos ICPC posts are especially popular among its audience, getting the most comments and subscriptions as well as the highest amount of watch time outside the longer composite videos. The composite videos also are very engaging to ICPC's YouTube audience; although they are longer than the other videos they do tend to get a high number of likes, subscriptions, and comments. Videos that highlight staff, VIPs, and sponsors tend to get the least amount of engagement as did the few videos classified as World Finals Events, which did poorly compared to videos classified as World Finals General.

ICPC should primarily work to post video content that highlights competitors and team members on a personal level, even if those videos tend to be longer than the standard two-minute timeframe ICPC uses for the majority of its YouTube videos. Challenge videos or Problem Analysis videos are frequently posted by ICPC but do not attract as many viewers as some of their more successful video categories, and those video types should be scaled back in how frequently they are produced. ICPC should continue to highlight interviews with competitors, longer composite videos, and competition videos since they attract viewers and go toward their goals of highlighting contestants. In order for ICPC to achieve their goals of highlighting staff and getting attention for sponsors, it is recommended that they pay to have those posts boosted or promoted to get more people to watch and engage with those videos.

## **Social Media Suggestions**

In order for ICPC to reach their goals of shining the spotlight on their programmers, presenting sponsors to their audience, and positively highlighted their staff it is recommended that ICPC does the following

- **Continue to prominently display photos of the competitors and conduct interviews with them that can be shared across different mediums**
- **Allow opportunities for the audience to directly engage with all forms of content to boost comments, likes, shares etc**
- **Use hashtags in posts that present sponsors to the audience or highlight staff to increase likelihood that content is shown to more people on Twitter and Facebook**
- **Use photos to highlight the staff members that work for ICPC and post those photos to Facebook and Twitter**
- **Be willing to pay to have VIP/Sponsor videos promoted across different types of media**
- **Figure out creative ways to insert your content into trending topics on Twitter and use those posts to highlight work done by staff members or sponsors**

- **Try to avoid short Facebook or Twitter posts that lack context and do not contain any photos, videos, or links. Only use these posts to deliver important information about event dates, locations etc**
- **Be willing to conduct interviews with sponsors where they explain their product/services to their audience and highlight those videos on YouTube**
- **Show how past ICPC programmers received opportunities to go work for organizations that sponsor ICPC and use photos and videos to promote the benefits their work environment has to offer.**
- **In addition to highlighting programmers in video interviews, be willing to highlight the work done by staffers as well and conduct interviews with them**

### **Sample Posts**

YOUR  
LOGO

ICPC

Sponsored

Meet [#ICPC2020s](#) team from the University of Wisconsin. Learn more about the members and what drove them into programming




**#ICPC2020 University of Wisconsin**

Watch More

photo courtesy of [ICPCnews.com](#)

  20

26 Comments 31 Shares

 Like

 Comment

 Share

**YouTube through Facebook**



**ICPC**

Sponsored

Like Page

We would like to introduce our staffers for #ICPC2020. We appreciate their hard work!



### ICPC Staff Team

Meet your ICPC staffers here

PHOTO COURTESY OF ICPCNEWS.COM

20

20 Comments 20 Shares

Like

Comment

Share

Facebook

# SEO Audit

A program that simulates how search engines see ICPC's website suggests that most of the page titles on their website are able to be properly indexed by search engines, which helps them see your pages as reputable. However, most of the URL's on ICPC's website do not have descriptive titles. Better page titles can help improve how search engines view your page. ICPC's site generally does a good job limiting the amount of times they use H1 tags to one time per page, and a low amount of H1 tags will help with SEO ranking. The images files on the site need to all have titles, which will help search engines view your pages as high quality and reputable. The website is not considered to be secure, and an SEO simulation program ranked your page speed score was 88 out of a possible 100, which is good overall but leaves the site with slight room for improvement. There does not seem to be any duplicated copy issues with the site, which should be avoided at all costs since it makes your content look less original, and search engines will not see your page as original content.

## Easy Fixes

- Check pages to make sure each has just one H1 tag
- Make sure image files are properly titled and title is unique to each image
- Make sure page titles are no more than 60 characters long

## Longer Term Fixes

- Work on usability issues on site itself- need to be better links to travel between pages. Make sure users can travel from one page to another with as few clicks as possible and that icons are clearly labelled, and navigation could be moved to top of home page
- Retitle certain URLs to make them more descriptive. The more descriptive a URL is the better it will look to search engines that are looking through your site.
- Focus on adding meta text



# ICPC Online Reputation Analysis

In order to get a sense on what people were saying about ICPC online, I conducted a reputation analysis, which is meant to provide a view into what someone will see when they search for information about you on popular search engines. Ideally, the results will be positive and relevant to what the user is searching for. To assess your reputation online, I wanted to get a sense of what a client or interested participant would see when they searched for “ICPC News” on Google search. I recorded the top 30 search results and analyzed the site URL, title, type of result, and type of sentiment (how positive, negative, or neutral the content was) contained inside the search result. A link to this spreadsheet can be found below. The top Google results that a user will first see upon searching ICPC News are mostly pages owned by ICPC such as your official website, Facebook page, Twitter account, and LinkedIn account. These accounts contain positive content since you own them and they are the first things a user sees upon searching for ICPC News. However, on later pages the search results that came up were not related to your organization, but rather various organizations and news outlets from around the world that also call themselves ICPC. Almost half of the top 30 Google results for ICPC news were for groups not affiliated with your organization. This suggests that not much news about your organization is being produced by independent or influential sites. Reaching out to outside organizations for more coverage could help with your search engine optimization and generate more awareness about ICPC for those who may not know about your organization. You could consider reaching out to news platforms or blogs asking them to cover ICPC events or conduct interviews with participants or sponsors to provide more positive content from independent sources, which would help generate more inbound links to an ICPC owned page from a different site, and improve your SEO ranking, putting yourself above other organizations that call themselves ICPC. While there are no negative search results, it would be helpful for you to generate more independent or influential positive content, which will improve SEO and help you gain exposure to a wider online audience.

<https://docs.google.com/spreadsheets/d/1t1-L0GEXVJprkGFEbM2wCUM6I5-UiLYhxG6whiOSEFI/edit#gid=0>

One of the most effective ways to gain online exposure is to have your content shared by an influential figure or organization not associated with ICPC. In order to figure out who you could share your content with, I used a data set known as an API to draw in 15,000 of your Twitter followers to determine which were the most influential and which accounts you should engage with in order to expand your audience. I did this by sorting the number of accounts each follower has from highest to lowest to see which accounts would have the most secondary influence, or the number of non-followers that might be exposed to your content if that account were to share it. I studied the details of your followers that had a high secondary influence and determined whether or not they may be helpful in posting on subjects similar to what ICPC might want to

share. I further studied the account descriptions and follow to follower ratio (with a ratio below 1 being a high priority) to determine which accounts would be ideal to engage with. I would recommend reaching out to the following accounts.

Account Name	Description	Followers	Topics of Interest
@MIT_CSAIL	MIT's largest research lab, the Computer Science and Artificial Intelligence Lab	124,033	Artificial Intelligence Programming Computer Science
@IBMDeveloper	IBM is a Global Coding Community	101,159	Coding, developing, computer programming
@TheOfficialACM	The world's largest educational and scientific computing society with nearly 100,000 members	52,405	Technology, computing, competitive programming
@STEMconnector	Organization looking to develop workforce in science, technology, mathematics, and engineering	42,889	Innovation, Technology, Education
@DesignWorld	Leading engineering resource serving design engineers	39,968	Product Design, Engineering, Technology
@codechef	Organization created to challenge and engage developer community and provide platform for competition	25,936	Challenges, competitive programming, showing off students work
@HigherEdSurge	News, community, and tools for those rethinking how higher education can be modernized	21,208	Education, Technology, bringing those two industries together
@gtcomputing	global leader in real-world computing breakthroughs that drive social & scientific progress	11,850	Education, Computer Science, software development
@INESCTEC	internationally-oriented multidisciplinary Associate #Laboratory with more than 30 years of experience in R&D and technology transfer.	8,260	Technology, Design, Research

@innovationbay	Community of tech entrepreneurs, innovators, and enthusiasts	7,554	Technology, strategy, innovation, leadership development
@CodioHQ	Learning platforms for higher education and STEM	6,302	Education, Computer Science, Technology

To reach out and engage with these accounts, I recommend a 3-part strategy made up of research, engagement, and direct action.

To research, first follow the account and pay careful attention to the types of tweets they post on a daily basis. Make sure to highlight tweets that you think would be relevant to your audience as well as tweets that share a common interest with ICPC

To engage, begin with favoriting and retweeting content posted by these accounts. Monitor whether or not these actions generate a response from these accounts and if they start doing the same with your content in return.

Direct Action consists of reaching out to the account directly either by tagging the account in an ICPC post or replying to one of their posts. This type of action is most likely to elicit a response from the account that will highlight your content and cause it to be shared with a secondary audience. Make sure the type of content you post is helpful and informative and likely to receive positive feedback from all who view it.