SIMFORM
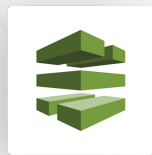
Case Study

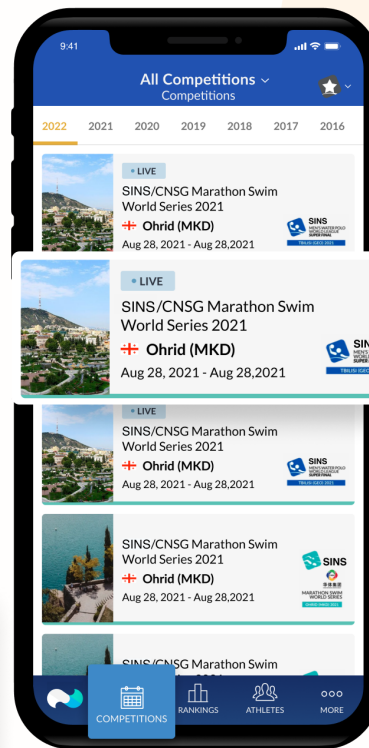## Optimizing app performance for the most sought after swimming federation events

→

Optimizing the application performance and content delivery mechanism to cater to the needs of 1000s of cosmopolitan fans during popular events like the Olympics, Swim Series, and Swimming World Cup.

Services Used

- Managed Engineering teams
- Mobile Application Development Services
- Performance and Load Testing
- DevOps Engineering

Technology Stack

Python Flask   Fastly   Bitrise   TeamCity   MySQL

iOS - Swift   Android - Kotlin   AWS Code Pipeline   Jmeter

Challenges

Having users around the world accessing the ongoing tournaments data, it is important to have content delivery and caching mechanism in place to handle all the requests effectively and efficiently.

Scaling up frontend mobile app architecture

The mobile app frontend architecture was not scalable and did not follow any design pattern like MVVM or MVP which made code less readable and bug fixing & feature enhancement much harder.

Upgrading the code to support the latest devices and standards

Inherited the code which was not regularly upgraded to support the latest devices and standards, followed bad architectural decisions made it difficult to scale and improve.

Meeting WCAG 2.0 standards

Meeting the success criteria set by WCAG 2.0 specifically for Mobile applications and ensuring that people with disabilities can access this app

Adopting CI/CD practices for seamless app updates

Automating build and release cycles to push frequent updates to the app store and play store by utilizing best CI/CD practices for mobile apps

Our Solution

Client sought to create an engaging, fan-centric experience through a mobile application to bring fans closer to the athletes and events.

The app features biographies & profiles of 25000+ athletes and has a comprehensive results section for both live and historical events, dating back to 2000.

We've helped them to optimize the performance of their app through various performance load testing techniques to accommodate the cosmopolitan user load.

LATEST NEWS

SINS Best Athletes of the Year" honoured after a memorabl...
Feb 07, 2020

SINS Best Athletes of the Year" honoured after a memorabl...
Feb 07, 2020

ATHLETES RANKINGS

FILTER

Select Disciplines

- SWIMMING
- DIVING
- HIGH DIVING
- WATER POLO
- ARTISTIC SWIMMING
- OPEN WATER

Pilar Pena
Spain, ESP
WATER POLO

Ivan Buljubasic
Croatia, CRO
WATER POLO

Stefan Mitrovic
Belgrade, SRB
WATER POLO

Josip Pavic
Split, CRO
WATER POLO

No	Players Name	Goals Scored	Personal Fouls	Attempts
01	Emma Harbet	4	1	
02	Paige Tancrel	1		1
03	Kari Temilic		1	
04	Hannah Reild	1		2
05	Leila Frendes	3		
06	Kate Henrich	1		

Goal Keeper	Total Shots	Action Shots	EP Shots	5M Shots
Allison Schmitt	08/10	07/08	00/01	01/01

SQUAD INTERNATIONAL SWIMMING

ABOUT SINS DISCIPLINES RESULTS NEWS EVENTS ATH

← LATEST RESULTS

WATER POLO
SINS Women's Super Final 2020

AUS 10 - 07 SPN
Quarter 3/4

LIVE

AUSTRALIA   SPAIN

Emma Harbet   Hannah Reild

Kate Henrich Paige Tancrel Leila Frendes

Kari Temilic   Kate Henrich

No	Players Name	Goals Scored	Personal Fouls	Attempts

UPCOMING BRO

CRO VS
Men's Water Polo Qualification Tour
Mar. 22 - 29, 2020

GRC VS
SINS Men's Wate League Interconti
Apr. 28 - May. 3, 202

HGR VS
SINS Men's World Water Polo Cup 2
Jul. 5 - 12, 2020

SOCIAL WALL

All   **Twitter**   Facebook

SINS@SINS1908   1 hour ago
1 day to go for this year's #DGP2020. First leg in Madrid 😊 Info & Schedule…
Expand

SINS@SINS1907   12 feb
🌟 SINS Best Male Artistic Swimmer 2019🌟
🇷🇺 Aleksandr Maltese is the be…
Expand

> Simform provided us with experienced programmers who were able to hit the ground running and begin contributing immediately.

Product Manager

SINS Olympic Marathon Swim Qualifier 2021
🇵🇹 Setubal (POR)   • LIVE

Men 10km

FASTEST TIME

2:02:07.60

2ND 2:02:13.10
Athanasios **KYNIGAKIS**

3RD 2:02:13.10
Tobias Patrick **ROBINSON**

SINS Olympic Marathon Swim Qualifier 2021
🇵🇹 Setubal (POR)

Men 10km

Hector **THOMAS**
1992-05-20
Date of Birth
Age at event: 29
🇬🇧 USA

1	24.11
RANK	OFFICIAL TIMEKEEPER Ω OMEGA

OFFICIAL   OFFICIAL
SEMIFINALS SUMMARY | SEMIFINAL 1 | SEMIFINAL

	ATHLETE	R.T.	TIME	TIME BEHIND
	Hector Thomas Ch... **PARDOE** 🇬🇧 GBR	0.80	24.11	-
2 4	Hector Thomas Ch... **PARDOE** 🇬🇧 GBR	0.71	24.50	00.39
3 3	Hector Thomas Ch... **PARDOE** 🇬🇧 GBR	0.73	25.05	00.63
4 2	Matan **RODITI** 🇬🇧 GBR	0.65	25.34	00.94

Fina   COMPETITIONS   RANKINGS   ATHLETES   MORE

SQUAD INTERNATIONAL SWIMMING

ABOUT SINS   DISCIPLINES   RESULTS   NEWS   EVENTS   ATH
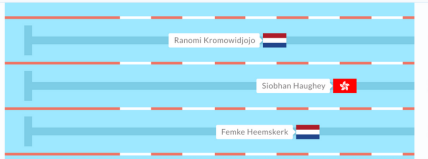
← LATEST RESULTS

SWIMMING
SINS Champions Swim Series 2020

Siobhan Haughey 🇭🇰
100m Freestyle
-0.15 Seconds

((•)) LIVE

SWIMMING AREA

Ranomi Kromowidjojo 🇳🇱   1
Siobhan Haughey 🇭🇰   2
Femke Heemskerk 🇳🇱   3

UPCOMING BRO

Rank	Heat Rank	Family Name	First Name	Country	Time	Time Behind	RT	Points	
🟡 1	1	Haughey	Siobhan	🇭🇰 HKG	53.47		0.72	904	—
Cumulative Split / Split									
50m(1) 25.69 25.69		100m (2) 53.47 27.78							
🔵 2	2	Heemskerk	Femke	🇳🇱 NED	53.83	00.36	0.70	886	+
🔵 3	3	Coleman	Michelle	🇸🇪 SWE	54.04	00.57	0.69	876	+
4	4	Kromowidjojo	Ranomi	🇳🇱 NED	54.15	00.68	0.66	870	+

🇭🇷 CRO VS
Men's Water Polo
Qualification Tour
Mar. 22 - 29, 20

🇬🇷 GRC VS
SINS Men's Wate
League Interconti
Apr. 28 - May. 3, 20

🇭🇺 HGR VS
SINS Men's World
Water Polo Cup 2
Jul. 5 - 12, 20

Our Solution

1

Refactoring the code and following MVP architecture

Refactored the code, starting with tuning up a bit and then gradually replacing large chunks by writing unit tests, following MVP architecture, and using the latest development standards like Storyboarding, Autolayout, Constraintlayout and integrating crash reporting tool

2

Delivering the responses to edge devices faster

Set up CDN and cached content to cater users from different parts of the world in a better way. By using Fastly's caching infrastructure with an adaptive TTL algorithm, the application was able to deliver responses to edge devices 70% faster than hitting the origin server for each request.

3

Executed accessibility testing following WCAG 2.0 standards

Carried out Accessibility automation testing to verify 50+ success criteria set by WCAG 2.0 using tools like Espresso Android and XCUITest

4

Setting up CI/CD pipeline & optimizing app performance

Optimizing mobile app update process from hours to minutes through Bitrise CI/CD and utilized JMeter for performance and load testing and checking the durability of the app under heavy traffic.

We are
Simform

Simform is a leading digital product engineering company. Over the last decade, our world-class tech teams have refined engineering practices for Fortune 1000 companies and successful startups.

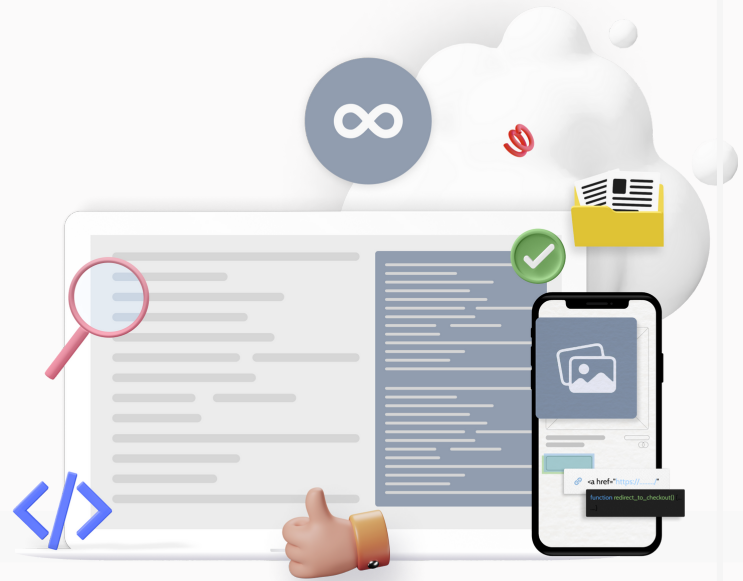Let's get in touch to extend your tech team with top talent!

Contact Us

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www.simform.com

Cloud Native Development and Modernization

Managed Software Engineering teams

Quality Engineering and Testing

DevOps and Infrastructure Management