



NARESH KUMAR DEVALAPALLY

Technical Manager

“At times, I might appear to be rebellious, or rather unconventional, in day-to-day activities but the underlying curiosity to find how things work and attempting to solve problems in different ways has helped me, the teams I lead and the companies I work for.”



My one phrase
“WHY NOT?”

Innominds

Connected Devices

EMPLOYEE IMPACT

Naresh figured out an elegant reactive coding pattern to interact between Web View and Mac App.

Bringing an AR/VR store to Mac

As the user expectations are changing fast with regard to the usage of applications across different platforms, mobile device brands need to ensure that their apps are available across Mac, Windows, iOS and Android platforms. One of the global mobile device OEM had to meet this expectation for their leading AR/VR app store that is available on Windows platform to be made available for Mac users.

An assumption made that the activity was just about porting turned out to be a wrong one and created a situation that the project may be delayed. Did the OEM brand eventually release the app for Mac users as announced?

Naresh, a multi-lingual in the app dev space

Being an engineer cum manager, Naresh often finds himself in these situations.

A bit about Naresh: He had a roller coaster ride, which he invited himself and enjoyed, over many years as he learnt multiple application programming languages starting from Java/Servlets to C# to Android/iOS/Web as per the changing needs. **This, multi-lingual skill, is the key reason that he now finds himself solving many cross-platform (Native and Web) app development/interaction scenarios.** He investigated the issue at hand and identified the root cause of the problem:

- Non-availability of binding architecture between web and native code with Mac SDK. Whereas, on Windows, the overall architecture was much simpler to interact with WebViews with a few settings and API calls.
- This led to problems to present the content as it is accessible only by setting certain parameters and callbacks from the native functions.

WKWebView to Mac Native Code Interaction

Naresh with his cross-platform expertise figured out an elegant solution based on reactive coding patterns. Key highlights:

- The solution is based on call-back mechanism that injects JavaScript code to enable WebView to interact with Mac custom code. The injected code acts as an interface between the existing html content and the native functions.
- 'Promise' based contextual interaction technique for event-based interaction
- A methodology, template and re-usable functions to speed-up the coding for 60+ functions

Naresh, with this cross-platform interaction solution and re-usable patterns/code, helped the developers to complete the project well within the schedule and eventually enabled the OEM to release their AR/VR store to Mac users on the date they promised to them.

ABOUT NARESH KUMAR

Experience: 11 yrs. in the IT industry

Technologies: Mobile Applications, Web Applications, HTML, JavaScript, iOS, Android, PHP, Node JS, ExpressJS, SAPUI5, Web Services API.

Specialities: Multimedia, AR, VR, Inter-platform application interaction

Hobbies: Gaming, Playing Musical Instruments

WHAT HE FOLLOWS AND WRITES

- Technology Solutions: [NSHipster, a journal of the overlooked bits in Objective-C, Swift, and Cocoa.](#) And, [articles of Matt, founder NSHipster.](#)
- Personal Relief: Stand-up comedy (follows - [Gabriel Iglesias](#))
- His latest blog post: [WKWebView to Native Code Interaction](#)

A FEW NUMBERS

60+
FUNCTIONS

Coded to enable interaction between the WebView and Mac Native App

30%
REDUCTION IN EFFORT

For the project by developing a template and re-usable code blocks for interface functions.

“Having an engineer and a manager who knows to code both native apps and web applications is very useful for us when we are building applications for multiple device platforms. In specific, Naresh was able to solve tricky problems of interaction between different native and web environments.”



**SREEDHAR
TADAVARTHY**

Practice Head - Mobile Apps
Connected Devices