Apple’s iOS is one of the world’s most popular mobile operating systems, powering over a billion devices worldwide. In order to learn about the applications that are part of the iOS ecosystem, we developed a system to automatically download and analyze iOS applications for certain characteristics, such as the libraries they use. This system is challenging to develop for iOS because of the scale of the App Store (over 2.2 million applications) combined with Apple’s digital rights management.   
We used a jailbroken iOS device (a device with administrative privileges for the user) to decrypt applications acquired from the iTunes store. We then leveraged static analysis on the decrypted application. Additionally, we used Cocoapods, a popular library repository in the iOS ecosystem, to find various libraries for download. After download, we extracted the unique signature and scanned the downloaded iTunes store applications for this signature.   
A longitudinal analysis over applications dated from 2013-2016 revealed an overall increase in the use of libraries by over 6000%. This could indicate that developers have an easier time integrating with 3rd party services and programming for iOS as a whole. Our analysis also showed Google libraries, which are most prevalent in our data, have become more widely used. For future research, the most prevalent libraries should be analyzed for security problems as their vulnerabilities would affect the greatest number of applications. We also discovered security concerns in the Cocoapods repository, which could lead to malicious libraries posing as legitimate libraries compromising the iOS ecosystem’s security.