

# Startup reports preinstalled apps do not consume more power than user-installed apps

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Officials at a software startup company based on a Purdue University innovation have conducted a study that concludes preinstalled apps on smartphone devices do not use more energy than apps installed by the user, dispelling a common myth.

Y. Charlie Hu, CEO of Mobile Enerlytics LLC, said preinstalled apps require the same or similar amount of [power](#) as apps with similar functionality available at app stores. He and his colleagues analyzed data from more than 70,000 smartphone devices in January. Hu also is a professor in Purdue University's School of Electrical and Computer Engineering.

"Our free eStar [energy](#) saver app provided rich energy profile information we used in our study," he said. "eStar shows smartphone users how fast different [mobile apps](#) in app stores drain smartphone batteries. It warns the user about apps that drain an excessive amount of the battery, and estimates how much battery life a smartphone user could save by stopping the apps. It further recommends a list of similar apps in the [app market](#) that are more energy efficient."

Hu and his colleagues compared several data points between preinstalled apps by three of the most popular Android phone vendors, Samsung, HTC and Motorola, and by two carriers, AT&T and Verizon, and user-installed apps. The data included the average number on a device, the average daily use, how much power they drained when used and how much power they drained when they weren't used.

"The low usage of preinstalled apps compared to user-installed apps came as no surprise because they were not actively downloaded by the user to serve a specific need. In fact, users sometimes may not even be aware of them," Hu said. "Perhaps their low usage also comes from myths that preinstalled apps draw more power in general and that they draw a lot of power in the background, or when they are not being used."

Despite the myths, Hu said he and his colleagues discovered the power being used by preinstalled apps in the foreground and the background was similar to user-installed apps.

"Sometimes the preinstalled apps from device manufacturers such as Samsung and carriers such as AT&T and Verizon drain less energy than similar ones installed by users, and sometimes they drain more," he said. "But based on the data, we can't argue that one type is always more power hungry than the other."

**More information:** "Are pre-installed apps more power hungry?"  
[medium.com/smartphone-enerlyti ... -hungry-fd75b4ab3393](https://medium.com/smartphone-energy-tips/are-pre-installed-apps-more-power-hungry-fd75b4ab3393)

Provided by Purdue University

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