Project Assignment

- **Part A** Select one mobile application to implement and test its performance on the mobile device. The selected application should be compute-intensive and latency sensitive. Examples include but are not limited to:
  - hand gesture recognition,
  - face recognition,
  - image based object recognition,
  - augmented reality,
  - mobile biometric and etc.

Project Assignment

- **Part B** Please analyze the module structure of the application, and try to partition the modules between the mobile device and a remote server (or cloud). Test the performance of the application under various partitioning, and show via experiments what are the factors and how do they impact the performance of application.

- **Part C** Based on the test results above, try to develop a system/component that supports the dynamic partitioning of the application in the run time.

Score Criterias

- Required to finish at least part A and B.
  - Part A: 60 points; Part B: 90 points; Part C: 100 points.
- Final deliverables for scoring
  - Final Report (60%)
  - Demonstration (40%)

Final Report

- Content of the final report should include:
  - **Title**
  - **Abstract**
  - **Introduction**
  - **[Main Body]**: application; performance metric and measurement; computation partitioning; system design, architecture;
  - **Experiments and results**: state the experiment purposes, environment settings, and results with figures or tables
  - **Conclusions**
  - **References**

Final Report

- ***The module structure*** of the application should be included in your report

- ***Measure the application performance*** under as many settings as possible, i.e., different partitioning, network connections (WiFi or 4G), bandwidth, mobile devices, or input data

- Beyond the experiment results, ***what are the insights*** you want to provide

- If Part C is finished, the ***component-and-connector structure*** the system is required

Demonstrations

- Each group has ***10 minutes*** to demonstrate the system and results

- Design the demonstration procedures, and make sure it ***proceeds smoothly and logically***
  - A checklist indicating what you will demonstrate is required

- Debugging the demonstrations at least ***10 times*** in advance, and make sure ***no failures occur***

Time Schedule

- *Demonstration* is tentatively arranged on **27/Dec/2017**.

- Each group submits a *confirmation report to* my email sely@scut.edu.cn on **10/Nov/2017**. The report shows what application you select to implement, and the module structure of the application source codes.

- Each group submits a *mid-term progress report* by **29/Nov/2017** via emails

- Each group emails the draft of *project report* and *source code* to me one day before the demonstration (**26/Dec/2017)**.

- The final version of the report should be submitted within one week after the demonstration **(3/Jan/2017).**