Face recognition service on Mobile Cloud

Project Proposal

1. Team Members

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| UNI | Name | Responsibility |
| yw2768 | Yuntong Wang | Deep Learning |
| xw2401 | Xucan Wang | Mobile App |
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2. Team Name

Team B

3. Project Title

Face recognition service on Mobile Cloud

4. High-level idea

With the rapidly increasing usage of cloud platform and the explosive growth of the mobile applications, face recognition based on cloud platform and mobile system has received attention from research and industrial communities recently. Mobile Cloud Computing (MCC) has been introduced to be a potential technology for mobile services and to solve the mobile resources problem by moving the processing and the storage of data out from mobile devices to the cloud. MCC offers abundant computing power that can be tapped easily.

Our project is aimed to provide face recognition service on mobile device with cloud computing from AWS (Amazon Web Service). The underlying pipeline for face recognition consists of four stages: detect->align->represent->classify. We plan to deploy multiple-layer deep neural networks to represent features of faces.

5. Technical details

A mobile and cloud based face recognition service should contain following techniques on cloud and mobile system separately.

On mobile system:

User interface mobile application, video/image input from camera, data processing request to AWS, data upload to AWS, face recognition results display on mobile.

On cloud service:

Image/video pre-processing, face detection, face align, face representation using deep neural networks, face classification, HTTP response of results to mobile.