HTC University AI Projects

Jason Chou

NTU HTC DL Competitions

Jason Chou

DEEPQ
QUEST FOR
The 2017 Conference on
Technologies and Applications of
Artificial Intelligence
TAAI 2017
Taipei, Taiwan
December 1-3, 2017

Medical Services

AR/VR

Deep Learning

Reinforcement Learning

Computer Vision

Cloud Computing

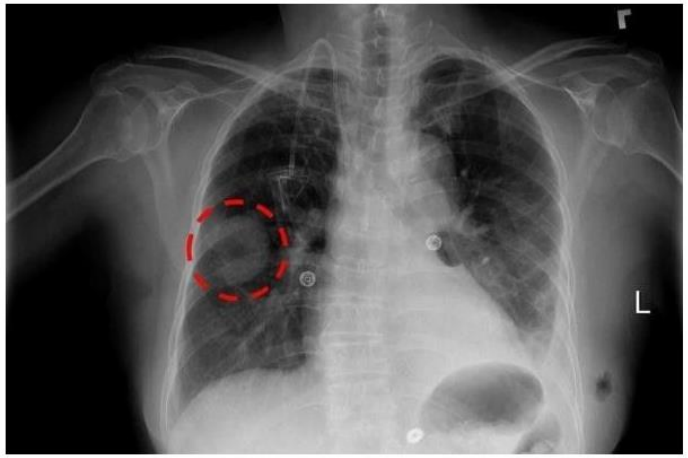
In Reality

- In medical domain, we have faced
  - There are lots of data in the existing HIS
    - **w/o labels**
    - Unsupervised learning?
    - Recent news:

From 幫趣

NIH公開大規模胸部X光數據集,3萬患者11萬圖像14類病理.

ChestX-ray數據集包含30,805名患者的112,120張正面視圖的X射線圖像，以及利用NLP從相關放射學報告挖掘的14類疾病的圖像標籤（每個圖像可以有多個標籤）



  - Little data is available
    - Transfer learning

Weakly-Supervised Learning for Finding Detection in Medical Images

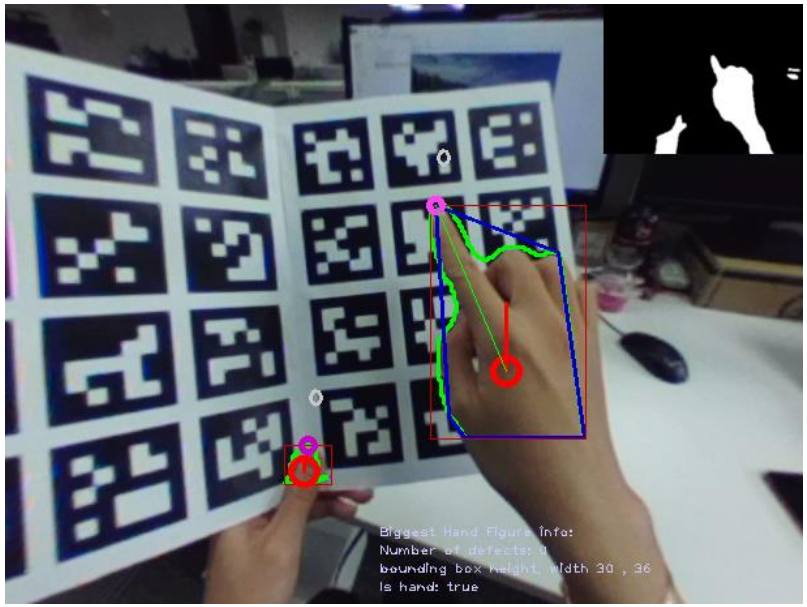
HaoCheng Kao

VIVE Paper

Aristo: An Augmented Reality Platform for Immersion and Interactivity, Zhongyang Zheng etc., Mountain View, MM (accepted), October 2017

Interaction Based on Hand Gesture

- The most basic requirement
  - Where is the hand
  - Where is the fingertip of the index finger



point-and-click

page flipping

Machine Learning for Egocentric RGB Hand Detection

Mark Chang

Competition Rules (競賽辦法)

- Contracts and non-disclosure agreement
  - Reference several international and domestic competitions
  - Follow the competitions hosted by Ministry of Science and Technology (MOST)
  - Most generic
- Dispatch with the contract

Incentives

- Original
  - First prize: 10,000
  - Second prize: 5,000
  - Third prize: 2,000
- Current
  - 獲得特優之隊伍頒予獎狀乙紙，及新台幣一萬五千元獎金。
  - 獲得優等之隊伍頒予獎狀乙紙，及新台幣五千元獎金。
  - 獲得佳作之隊伍頒予獎狀乙紙，及新台幣一千元獎金。
  - 得獎作品隊伍之隊數及獎項由「宏達國際電子股份有限公司代表及授課老師」視各組隊數與作品優良情形議定，必要時可從缺、調整（並得將名額移至他題）或增加，但以不超過獎金總額為限，每題獎金總額為新台幣四萬元。
  - 15,000 x n1 + 5,000 x n2 + 1,000 x n3 <= 40,000