

고려대학교

빅데이터 연구회

# KU-BIG

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딥러닝1조 2주차

박건빈, 유현우, 이보근, 최홍석, 홍석환



# 목 차



지난 주차 활동



Texture based Segmentation



이번 주차 활동 목표와 결과



추후 계획

## 1. 지난 주차 활동

- Hair Segmentation을 다루는 2개의 논문 찾고 이해
  - Augmenting CRFs with Boltzmann Machine Shape Priors for Image Labeling
  - Hair detection, segmentation, and hairstyle classification in the wild
- 각각의 논문에서 사용하는 데이터셋 다운받음
  - LFW Face Database
  - Figaro-1K, Patch1K
- 첫번째 방식에 제약이 더 많아 더 일반적인 두번째 방식으로 진행

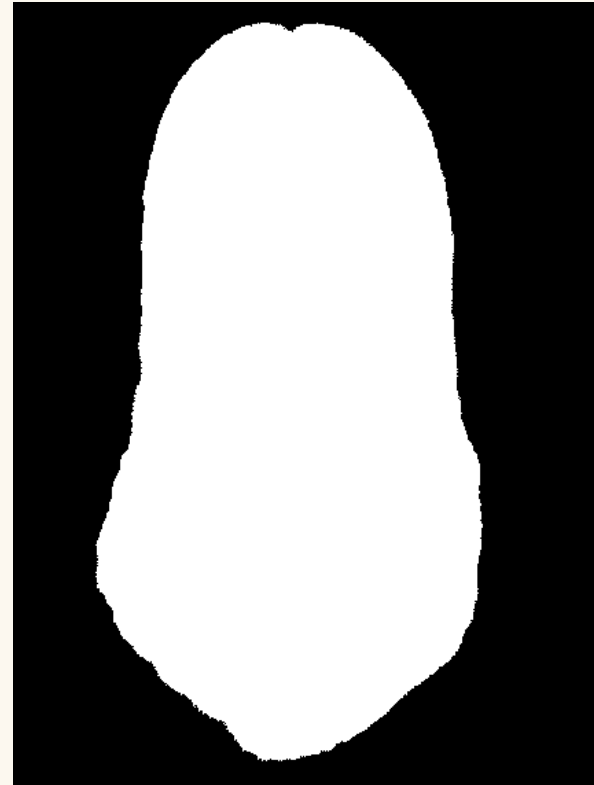
## 1. 지난 주차 활동

Figaro1K Dataset

- Original
- GT



Original



Ground Truth(GT)

## 1. 지난 주차 활동

Patch1K Dataset

- Hair
- Non-Hair

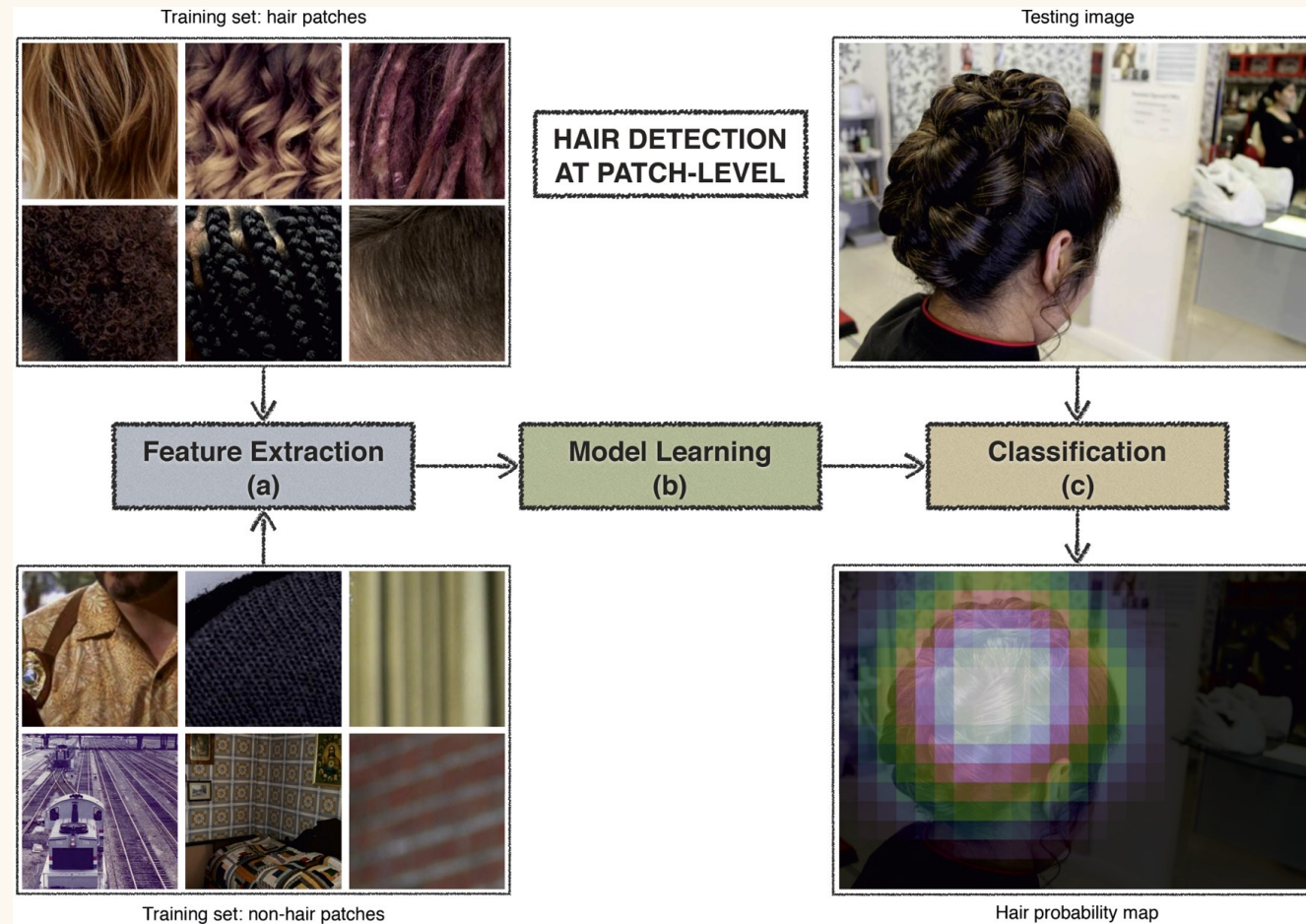


Hair



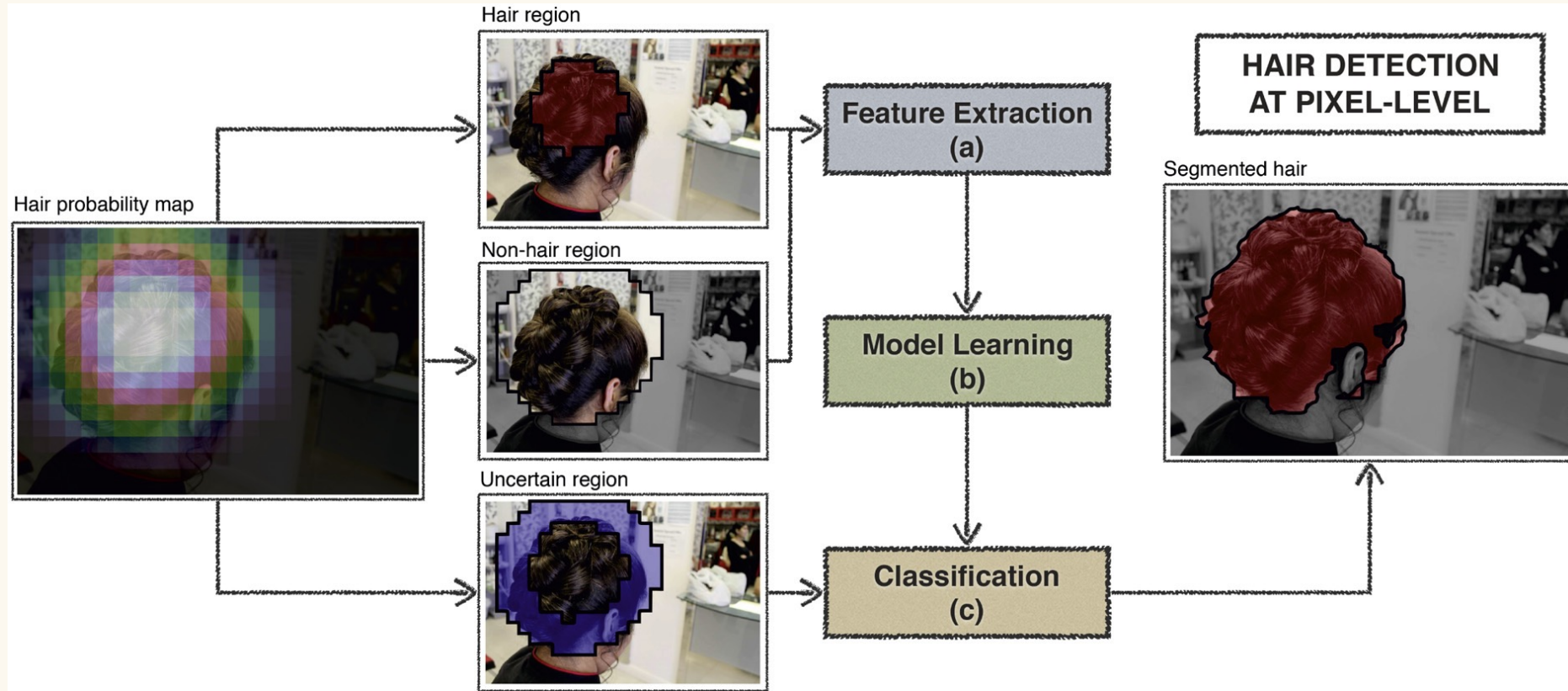
Non-Hair

## 2. Texture based Segmentation





## 2. Texture based Segmentation



### 3. 이번 주차 활동

- Keras Tutorial 코드 돌려보고 이해
- Figaro1K, Patch1K 데이터셋 다운받고 numpy array로 import
- Classification 수행하는 유명한 모델 찾기
- Hair, Non-Hair Classifier training



## 4. 추후 계획

- Hair, Non-Hair Classifier 이용하여 Probability map 생성
- Output = [Certainly Hair, Certainly not Hair, Uncertain]
- Uncertain areas 대상으로 세세한 Segmentation 수행
- Segmented hair pixels을 염색시켜주는 Filter 검색후 적용
- 모델 완성
- PCA, LTP등 논문에 소개된 Accuracy 올려주는 기법 적용
- Accuracy를 올려줄것으로 기대되는 아이디어들 적용

A stylized illustration of a person from the chest up, wearing a grey suit jacket, a white shirt, and a dark tie. The person's face is partially visible at the top, showing a red nose and a brown beard. A large, black-outlined speech bubble is positioned in front of the person's chest. Inside the speech bubble, the text "Do you have any question?" is written in a sans-serif font, with "question" in pink and a large pink question mark below it. In the bottom right corner of the image, the text "Thank you for your attention." is written in a white sans-serif font.

Do you  
have any  
question  
?

Thank you  
for your attention.