



NUS
National University
of Singapore

Computing

2018

SOC SUMMER WORKSHOP

Facial Expression Recognition

> Cloud Computing & Big-Data <

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CONTENT

1

Research

2

Development Tools

3

Functions

4

Future Arrangement



Research

Research:

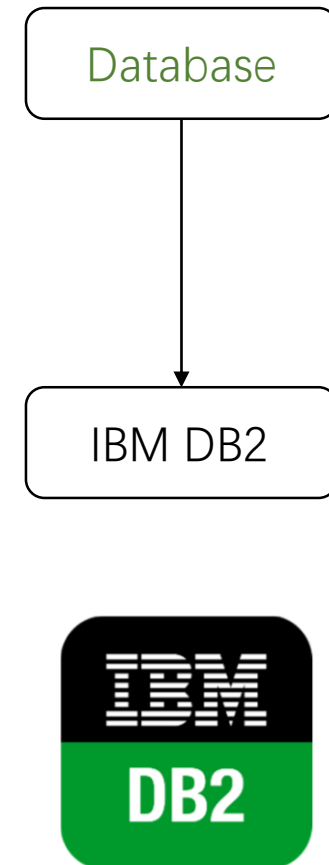
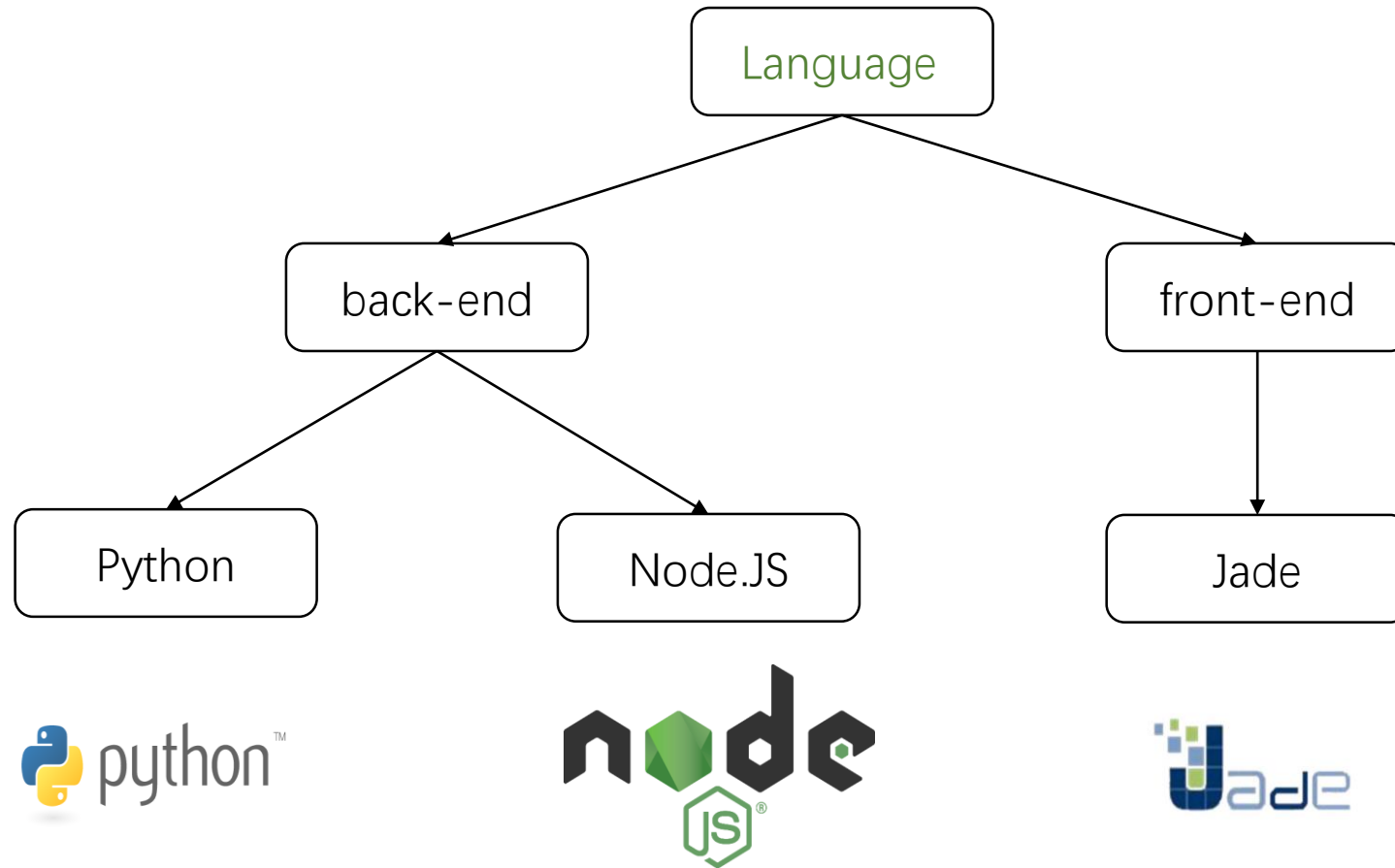
Facial expression recognition
based on deep learning

<https://blog.csdn.net/darlingwood2013/article/details/54845625?locationNum=11&fps=1>

The screenshot shows the Wikipedia article for 'Emotion recognition'. The page has a light blue header with 'Article' and 'Talk' tabs. The title 'Emotion recognition' is in a large, bold font. Below the title is the text 'From Wikipedia, the free encyclopedia'. The main text states: 'Emotion recognition is the process of identifying human emotion, most typically for something that humans do automatically but computational methodologies have al'. A 'Contents' box is visible, listing sections: 1 Human, 2 Automatic (with sub-sections 2.1 Approaches, 2.1.1 Knowledge-based Techniques, 2.1.2 Statistical Methods, 2.1.3 Hybrid Approaches), 2.2 Datasets, 2.3 Applications, 3 See also, and 4 References. The left sidebar contains various Wikipedia navigation links like 'Main page', 'Contents', 'Featured content', etc.



Development Tools



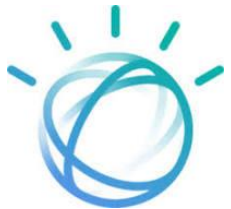


Development Tools



OpenCV---Processing Images

OpenCV, Open Source Computer Vision Library, is a cross-platform computer vision library. It has C++, Python and Java interfaces and supports Windows, Linux, Mac OS, iOS and Android.



IBM Watson---Visual Recognition

demonstration---

https://dataplatform.cloud.ibm.com/studio/watson-vision-combined/DefaultCustomModel_7153695/view?project_id=44c0ce14-dabf-483b-9689-e5ae0d6c2ce9&training_definition_id=9542c471-3fec-43b7-bddd-bba9e0281ff6



TensorFlow---Machine Learning

An open source machine learning framework for everyone.

Numpy, Pandas---Data Container



Production Functions

Image acquisition

Use camera to gain the image of one person/ Upload the image of one person

Face recognition

Use API of face recognition from IBM Watson

Emotion presentation

Read the person's expression and show a emoji to match it

Functions

Gender identification

Recognize the person's gender

Age prediction

Estimate an accurate range of the person's age



Future Arrangement

Implement Application

Deploy in the Cloud

User Interface

[THANKS]

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