Connecting Professional Skill Demand with Supply

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Introduction

Goals

• Detect professional skills required on the job market
• Analyse the evolution of required skills
• Recommend appropriate learning material
Outline

Data
• Acquisition & Enrichment
• Set Statistics

Dashboard
• Methodology
• Components
Data Acquisition & Enrichment

Target data - Job Postings, Courses and Lectures

Acquisition - Using dedicated API and custom crawlers

Enrichment

• Wikification
• Extracting skills using SARO ontology
• Extracting locations and countries using GeoNames ontology
Data Set Statistics

Job Posting Data Set

- Approx. 3.3M job postings acquired in 18 months
- 144 countries – majority of job postings in Europe
- 650 unique skills extracted
Data
Set Statistics (cont.)

Course Data Set
- 63k courses; 8k online & 55k offline
- Information available – title, description, course provider etc.

VideoLectures Data Set
- Over 20k video lectures
- Information available - title, description, link to lecture etc.
Dashboard

DATA SCIENTIST / BIG DATA ANALYST
Raona, Barcelona, Spain
PUBLISHED ON AUGUST 28, 2017

data-mining

DESCRIPTION
En Raona buscamos un Data Scientist creativo, con ganas de empezar proyectos nuevos e imaginar aplicaciones donde podamos aplicar machine learning en nuestro... Hace 2 días en trabajos

MACHINE LEARNING FOUNDATIONS: A CASE STUDY APPROACH
MACHINE LEARNING
A CRASH COURSE IN DATA SCIENCE
NEURAL NETWORKS FOR MACHINE LEARNING

data mining

Top 10 Skills

Map data ©2017 Google, ORION ML. Terms of Use

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Dashboard
Methodology

Calculate basic statistics and return results

Wikify text query

Result search and filtering using query information

Jar Serving Network

Concepts

Job Posting Network

Course Network
Dashboard DEMO
Dashboard

Components

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machine learning
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List of Job Postings
- Title, description, skills etc.
- Job postings written in different languages

Recommended courses
- Different online course providers
- Clicking on course redirects to the course provider
Dashboard
Components (cont.)

Top hiring locations
- Location clustering
- Clicking on pin shows location name and number of job postings

Basic statistics
- Ten most demanded skills histogram
- Number of job positions timeline
Future Work

• Improve Skill Extraction
• Add and Improve Dashboard Features
• Continue Acquiring Data

Dashboard available at http://jobs.videolectures.net

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