OpenClassrooms Courses Explorer on Github

When you start a path at OpenClassrooms, the simplest way not to get lost is to follow the guideline, from project to

Introduction

project, until success! When you start a project at OpenClassrooms, the simplest way not to get lost is to follow the required courses, from

course to course, until success! When you start a course at OpenClassrooms, the simplest way not to get lost is to follow the guide, chapter after chapter,

until success! However, courses have prerequisites: it is recommended to follow courses B,C and D before starting course A. And B,C,D require themselves several courses...

This is where things start to get tricky: • Even by reducing healthy learner curiosity (avoid non-necessary references, skip light requirements), you will still

bad companions for this journey

• Moreover, Scheduling correctly your projects agenda becomes a time-consuming task itself, with few time for that!

• Cross references, circular references add some fun to your attempt to follow the links: a paper and a pen become

need to keep track of all the required courses to achieve a given course.

path-project-course map at OC?

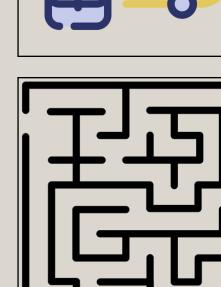
- enter the depths of Knowwood-OC the forest-of-OpenClassrooms-knowledge, but you won't know where they will take you to!

Perhaps it is a purposeful choice to let students find their ways by themselves, to let them

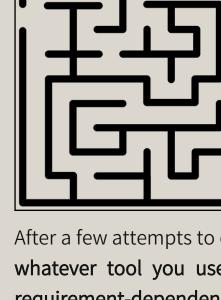
Imagine you start your journey in an unknown place. Somewhere in front of you a few tracks

discover some treasures along the road if curiosity and serendipity are in a good day, but... Even Dora the explorer has a map, hasn't she?

Perhaps the **complexity of paths and references between courses** has grown with time?



Perhaps a given uncertainty regarding the student's preestablished knowledge of the courses requirements, added to a given uncertainty regarding the student's curiosity and available time "to read further", has discouraged the desire to build a "step-by-step" schedule for each path? Would these sources of fuzziness (complexity and uncertainty) explain the absence of a full



When achieving my third project, I was used to find my way along the courses links, and well aware of the interest to self-discover goldnuts along the way. I started project 4 with same curiosity, interest, will to learn, motivation as before, and began to take note of the prerequisites for this new project. The cross references between courses, chapters, other courses, other chapters, overwhelmed me progressively with a feeling of being lost again. As we will see soon below, this feeling was totally predictible and understandable.

requirement-dependencies between courses!.

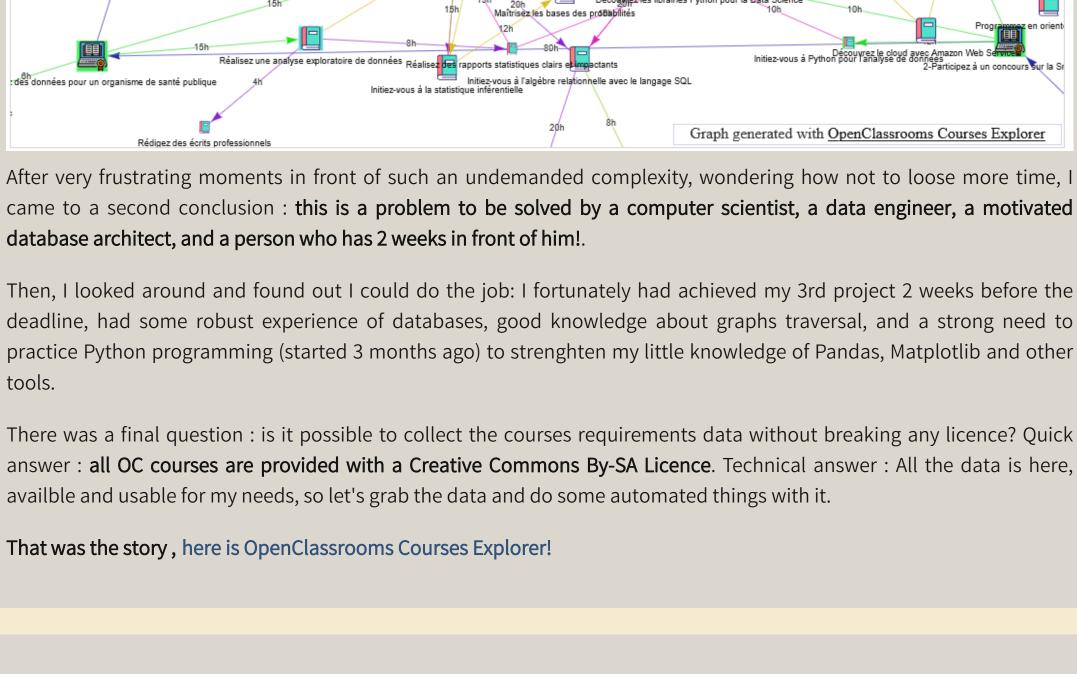
uncomfortable when following courses, chapter after chapter.

7-Détectez les Bad Buzz grâce au Deep Learning

After a few attempts to calm down this growing feeling, I came to a first conclusion: paper, pen, post'it, calc-sheet, Jira, ... whatever tool you use to draw your learning roadmap is unuseful without a clear sight of the whole links and To understand my mindset when I started following the courses of my 4th project, here is a screenshot of the dense relational network between courses of the 3rd and 4th projects in the path "Ingénieur IA": In front of such a complex network, one can easily understand that a student can feel a bit lost, and feel a bit

Classez et segmentez des données visuelle

4-Construisez of modèle de scorino



time than expected to finally achieve the scheduling tool. There is no "in-between" approach: between building a bunch of scripts and building a clean application with a documented code, I chose the second one. Moreover I wanted to

Focused learning palette Topic Graph generated with OpenClassrooms Courses Explorer Schedule for the path Ingénieur Machine Learning Recommended references are also explored (depth=1)

Create a schedule

Schedule for the path Ingénieur IA

course

4312781-Apprenez à apprendre

Course difficulty: 1

Launch some queries on the datasets

objectif-ia-initiez-vous-a-lintelligence-artificielle

initiez-vous-a-python-pour-lanalyse-de-donnees

initiez-vous-au-langage-r-pour-analyser-vos-donnees

Create some dynamic graphs

heading="Topics and Paths at OpenClassrooms<i> ...et voilà</i>!"

[10]: ht = oca.build_path_agenda_html(path_id,required_max_depth,references_max_depth)

href= occ.VizFolder+"oc_path_"+str(path_id)+"_schedule.html"

display(IFrame(href,height='800px', width='99%'))

Hereunder is the schedule for required courses (depth=2)

Achieved

1-Découvrez le métier d'Ingénieur IA

status

On the critical path

f = open(href, 'w') f.write(ht)

Language: fr / Duration: 12m

rank

Rank req: 0

Rank ref: 0

°req out: 0

°ref out : 0

#encoding trick for those who like accents in their titles:

initiez-vous-au-machine-learning

df=ocd.OC_Courses[["topic_id","course_id","course_name","course_title","course_language","course_url"]][ocd.OC_Courses["topic_id"].isin([topic_id])]

Objectif IA: initiez-vous à l'intelligence artificielle

Initiez-vous à Python pour l'analyse de données

Initiez-vous au langage R pour analyser vos données

Initiez-vous au Machine Learning

Topics and Paths at OpenClassrooms ...et voilà!

course name

3 4449026 initiez-vous-a-lalgebre-relationnelle-avec-le-langage-sql Initiez-vous à l'algèbre relationnelle avec le langage SQL

g = ocg.build_topics_and_paths_graph(height='700px', width='99%', bgcolor="#d5d0f5", font_color="#141414", heading=heading, show_titles = True,

directed=False, notebook=True, layout=False, show buttons=False)

course_title course_language

course url

https://openclassrooms.com/fr/courses/6417031-objectif-ia-initiez-vous-a-lin...

https://openclassrooms.com/fr/courses/4449026-initiez-vous-a-lalgebre-relati...

https://openclassrooms.com/fr/courses/6204541-initiez-vous-a-python-pour-lan...

fr https://openclassrooms.com/fr/courses/4011851-initiez-vous-au-machine-learning

fr https://openclassrooms.com/fr/courses/4525256-initiez-vous-au-langage-r-pour...

#cours du topic 3 (data)

Courses of the 'DATA' topic: 44

6417031

3 6204541

3 4011851

g.show(href)

[10]:

display(df.head())

topic id course id

topic_id=3 #data topic (see data/topics.csv)

print("Courses of the 'DATA' topic : ",len(df))

1. Topics and Paths

[10]: href= occ.VizFolder+"oc_topics_and_paths.html"

heading=heading.encode('utf-8').decode('latin')

°req in:0 °ref in : 0 Layer: 0 Project #1 courses duration project duration percent 1 achieved 6.0 h1 courses 60 h How to analyze my Courses progression? In the "my_courses" folder, there is a notebook analyzing your progression: it is largely using an exercise correction given in a Course about exploratory analysis. Here is the course analyzing OC courses progression. How to export my Path Schedule towards CSV or Jira? In a next version of the application.

duration

6.0 h

needs

needed by

Required by

Project 1

People interested, mostly OC students following the DATA paths, are welcome to contribute: contact me via the OC Workplace!

Remember all of this is just a Proof of Concept, a Work in Progress. I will be very happy if someone gets something useful from this tool. Please let me know!

practice Pandas, Matplotlib, Voila, web scrapping... Now it is time to deliver the job and let you do something with it. Who can use OC-C-E? • Someone with Python + Jupyter understanding • Someone who knows someone who does that For now, I do not plan to make it a standalone "one-click-install" application. What can I really do with OC-C-E? • Use the datasets provided with the application • Refresh the datasets from time to time • Explore Topics and Paths • Explore Paths and Projects • Explore Courses and Chapters • Explore Skills (this will be delivered in a later version) • Schedule your path and take your progression in account • Plenty things I do not even know, that you will imagine with the datasets. OpenClassrooms Courses Explorer: How To install OC-C-E Requirements • Install all packages listed in the file requirements.txt • If running a virtual Anaconda environment : use the requirements.yml file ■ To ensure ipywidgets will run properly within the notebooks, be sure to install the package like this: conda install -c conda-forge ipywidgets • If running python VirtualEnv: use the requirements.txt file ■ To ensure ipywidgets will run properly within the notebooks, be sure to install the package like this: pip install ipywidgets • The web scrapper used by this app is Selenium, with a Firefox Driver. If you don't want to use Firefox and prefer Chrome, then you'll have to configure some files (setup the proper path towards your driver in the OCCoursesConfig) • To use the notebooks with Jupyter, be sure to have setup ipywidgets as nbextension • jupyter nbextension enable --py widgetsnbextension For Jupyter Lab: install jupyter labextension install @jupyter-widgets/jupyterlab-manager How to explore Topics, Paths, Projects and Courses Here are some captures of the application. The widgets are self-explanatory. The Data Interface ... OK: 1121 lines / 5 columns.
Loading data/my_courses.csv ...
... OK: 15 lines / 11 columns.
Loading data/my_progress_courses.csv ...
... OK: 15 lines / 3 columns.
Loading data/my_progress_projects_csv 637 courses 2071 courses skills Projects Schedule Courses Information ◆ Connect OpenClassrooms ➡ Disconn... You are not logged in. **OpenClassrooms Courses ENTRIES** STATUS ACTION Collect! 637 OK Collect! 15min COURSES 🗞 Collect ! 7768 OK COURSES CHAPTERS (See above) COURSES LINKS 2498 OK Collect! 6 h! 52 OK Collect! 10m 362 OK PATHS SKILLS 🗞 Collect ! 15m PROJECTS 🗞 Collect! PROJECTS-COURSES LINKS 1121 15 2min connexion required --> Write OpenClassrooms Courses to CSV --> ■ Save Database to CSV! The Paths tab Data Courses Schedule Projects Height Graph generated with OpenClassrooms Courses Explorer The Projects tab Shape OC Wheel V Max Depth

What is OC-C-E? • OC-C-E is a tribute to OC: this is the cost I pay to get a full overview of OC courses interconnexions. • OC-C-E is again a tribute to OC: this is a work motivated by the will to loose less time and embrace as much good OC Courses content as possible to avoid missing goldnuts somewhere • OC-C-E is a submarine project between project 3 and project 4: I used all python data science programming I had learned the 3 last months • OC-C-E is an OpenClassrooms Courses Explorer What is *NOT* OC-C-E? • OC-C-E is **NOT** a work of OpenClassrooms, it was not demanded by anyone in OC Organization. For this reason, do not ask OC any support or information about this tool. • OC-C-E is **NOT** a commercial industrial tool: it is free, it is "as is", and there is a licence to explain how to use it. • OC-C-E is **NOT** for me myself and I (anymore). It was first motivated by my own needs, but the product belongs now to the data-python-scientists and other OC students who will want to do something with it.. Where are the OC-C-E entry points? • Launch with Jupyter Lab: several notebooks are provided, one with the full application and some others with tutorial step by step examples. • Launch with Jupyter Notebook: same as above • Launch with Voilà: the main application will start with Voilà! voila --enable_nbextensions=True --VoilaConfiguration.file_whitelist=" ['.*\.(csv|html|png|jpg)', 'viz.*', 'data.*']" OCCoursesExplorer.ipynb See below for installation instructions Why OC-C-E? The personal story leading to develop OpenClassrooms Courses Explorer is now 3 weeks behind. It took me way more

Graph generated with OpenClassrooms Courses Explorer The Courses tab The Schedule tab Hereunder is the schedule for required courses (depth=2) 1-Définissez votre stratégie d'apprentissage 3848166-Faire l'inventaire de ses compétences Rank ref: 0 °ref out:0 How to use OC-C-E with Notebooks? Feel free to use and adapt the tutorial notebooks provided: step by step, courses and paths, scheduler ...

How to contribute?

Checkpoint

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