

CareerHack 101:

What is LMI for All
and how can I use it?



UKCES

UK COMMISSION FOR
EMPLOYMENT AND SKILLS

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Introduction

Interested in entering in the LMI for All CareerHack contest but not sure where to start? Fear not! We've put together this handy guide to walk you through LMI for All, what the API means and how to use it – you'll be on your way to submitting your entry in no time! **Happy hacking!**

Every year in the UK a huge amount of high quality information is gathered about the UK labour market that could be used to help people make better decisions about their careers. Although this information is freely available, it is often not easy to access or understand.

The aim of LMI for All is to bring this data together in one place, making it available as an API to developers, app makers and web designers at no cost, so that they can incorporate it into websites and applications, providing high quality up to date information for their users.

Not sure of how you could use our data? This document is designed to show you the extent of the information available, and how you could make use of it. It also provides links to the documentation, syntax, support and some examples of how the data has been used so far.

The Data

The LMI for All data tool includes information that can answer some of the most common questions asked when people are thinking about their careers, from how much a certain job pays to the kind of people who typically do a certain job and their qualifications. You can also make comparisons across different jobs and regions.

Main datasets included in the LMI for All Database

The current version of the LMI for All database contains the following key datasets:

- 1** **Employment and replacement demands from Working Futures:** Provides very detailed information on job opportunities, covering a range of dimensions including occupation, industry, UK country /region, gender and employment status. As well as reporting actual historical employment levels this also includes projected future employment levels to 2020. It also includes estimates of Replacement Demand, which is a measure of job openings likely to arise over a selected period because of people who are currently employed retiring or leaving for other reasons
- 2** **Pay based on the Annual Survey of Hours (ASHE) and earnings and the Labour Force Survey (LFS):** Provides the same level of detail on pay but does not include any projections. The current data is restricted to 2012 but it is planned to extend this as new data becomes available on the same basis.
- 3** **Hours based on ASHE:** Provides a similar level of detail for hours as for pay.
- 4** **Unemployment rates based on the LFS:** Provides information on Unemployment rates. In principle a similar level of detail is provided as for pay (again excluding any projections). However, small sample sizes mean that many of the more detailed results cannot be generated or published.
- 5** **Skill shortage vacancies based on the Employer Skill Survey:** Provides information on vacancies. At present this is based on the Employer Skills Survey and focuses on skills shortage vacancies.
- 6** **Skills, abilities and interests data based on the US O*NET system:** Provides detailed data on the skills, abilities and interests associated with particular occupations. The data are taken from the well-respected US O*NET system. They are tied to the UK occupational categories by a mapping that links each UK occupation with one or more US occupations.

In practice some of the details here and elsewhere may need to be suppressed because of concerns about privacy, disclosure of commercially sensitive information and lack of statistical robustness. Details of this are given in the description of the individual datasets on the [LMI for All website](#).

Syntax - easy as ABC

A What information can I get?

The API is called by your program. Each call to the API has different parameters and different results dependant on the data that is required. A full list can be seen in this link: <http://api.lmiforall.org.uk/>

B Try it!

Want to get information on Standard Occupational Classification (SOC) Codes? Easy! Go to <http://api.lmiforall.org.uk/> and on the screen shown below click on the link for /SOC:

UKCES LMI For All API **Explore**

/ashe Show/Hide | List Operations | Expand Operations | Raw

/onet Show/Hide | List Operations | Expand Operations | Raw

/soc Show/Hide | List Operations | Expand Operations | Raw

The Standard Occupational Classification (SOC) maps job titles to code numbers. Most other endpoints in the LMI For All API rely on SOC codes, so this is typically the first request you want to make.

GET /soc/code/{code} Get extended information about a particular SOC code.

GET /soc/search Find SOC codes by keywords - pretty much like googling it.

/o-net Show/Hide | List Operations | Expand Operations | Raw

/wf Show/Hide | List Operations | Expand Operations | Raw

/fs Show/Hide | List Operations | Expand Operations | Raw

/ess Show/Hide | List Operations | Expand Operations | Raw

/vacancies Show/Hide | List Operations | Expand Operations | Raw

[BASE URL: <http://api.lmiforall.org.uk/api/v1> , API VERSION: 1]

Open up /soc/search as shown above and then type in 'retail' in the parameter and then hit "Try it Out".

This brings up the picture on the next page. It shows you the URL that you would embed in your code and also it shows the response that you would get.

GET /soc/code/{code} Get extended information about a particular SOC code.

GET /soc/search Find SOC codes by keywords - pretty much like googling it.

Implementation Notes
Returns a maximum of 30 items, sorted by relevance. Search doesn't work for qualifications, because they're usually very similar between similar jobs.

Response Class Model | Model Schema

List[SOInfo]
class SOInfo(description: string, qualifications: string, soc: int, tasks: string, title: string)

Response Content Type
application/json

Parameter	Value	Description	Data Type
q	retail	Search string.	string

Try it out! [Hide Response](#)

Request URL
http://api.lmiforall.org.uk/api/v1/soc/search?q=retail

Response Body

```
[
  {
    "soc": 1190,
    "title": "Managers and directors in retail and wholesale",
    "description": "Retail and wholesale managers and directors plan, organise, direct and co-ordinate the operation",
    "qualifications": "Entry requirements vary from company to company. Entrants may possess GCSEs/S grades, A level",
    "tasks": " appoints staff, assigns tasks and monitors and reviews staff performance;\n liaises with other staff"
```

C Explore all the data

There are many different calls to the API that can be made, but the way to get them is just the same as you did for the SOC code. Try out the various options and see the wealth of data that is available. All of the different calls including, descriptions, are included in the link <http://api.lmiforall.org.uk/>

Still need a bit of hand? Don't worry – there are plenty of web apps out there that will help you create an app from scratch – and you don't need to know any coding to get started! While these won't be perfect for everyone, and may be a bit restricting in terms of what they allow you to do, they will certainly get you off the ground, and can show you just how easy it is to end up with a slick looking app from nothing. There's plenty to choose from, but here are some examples:

<http://www.goodbarber.com/>
<http://apps.appypie.com/>
<http://www.buzztouch.com/>
<http://www.apps-builder.com/en/home>
<http://mobile.conduit.com/>

Example sites

To make it easier to see how it works, UKCES have set up a simple demo web page. The link is below.
<http://www.lmiforall.org.uk/examples/apidemo/>

Open it up in Chrome (It is currently not compatible with Internet Explorer). Type in the part of the job title in the 'Search for a Job' box and on the right it will list all the jobs that relate to that key work. In the example below, the job 'Architect' has been searched and of those ones that appear, 'Civil Engineer' has been clicked on and the Job information as well as pay information appears below.

Save this page to your PC and you can see the JavaScript that is used and you can re-use this if you wish.

Search for a job:

Search for a job:

Job Information

Civil engineers

Civil engineers undertake research and design, direct construction and manage the operation and maintenance of civil and mining engineering structures.

undertakes research and advises on soil mechanics, concrete technology, hydraulics, water and waste water treatment processes and other civil engineering matters; determines and specifies construction methods, materials, quality and safety standards and ensures that equipment operation and maintenance comply with design specifications; designs foundations and earthworks; designs structures such as roads, dams, bridges, railways, hydraulic systems, sewerage systems, industrial and other buildings and plans the layout of tunnels, wells and construction shafts; organises and plans projects, arranges work schedules, carries out inspection work and plans maintenance control; organises and establishes control systems to monitor operational efficiency and performance of materials and systems.

Select the job you want:

SOC Code	Job Title
2431	Architects
2135	IT business analysts, architects and systems designers
3121	Architectural and town planning technicians
1122	Production managers and directors in construction
2136	Programmers and software development professionals
2436	Construction project managers and related professionals
2121	Civil engineers
2122	Mechanical engineers
1259	Managers and proprietors in other services n.e.c.

Here's some more examples of websites which have already used the LMI for All API, why not have a look at how they have used it for some inspiration:

<http://rcultd.co.uk/wf/>

<http://icould.com/job-title/1131/>

<http://hacks.rewiredstate.org/events/lmiforall>

You can also view a video demo of a website utilising the LMI for All API here:

<http://www.youtube.com/watch?v=NV5no8MbScQ>

Support

There is a developer community forum at <http://community.lmiforall.org.uk> - please post any questions here and they will be answered within 24 hour during the working week, this should help you out with any sudden headaches! In addition to this, you can also tweet; find us on twitter @LMIforAll and tag your post with #Careerhack.

Documentation

The main documentation for LMI for All is here:
<http://www.lmiforall.org.uk/documentation/>

There is also the following link that you may be interested in, it gives a step by step guide on how to use the data, as well as a few interactive examples (and some homework...):
<http://editor.monkeycruncher.org/view/985e3435-3052-4bd9-8c80-4ab489f2cb83>

All of the above are best opened in Google Chrome.

The Competition

Ready to enter? Here's a quick reminder of a few rules and how to apply:

The CareerHack App Challenge is open to anyone and has a first prize of £10,000. There is a runner-up prize of £5,000 and a further £5,000 prize for entries by students aged 16-24 who are engaged in Further Education.

All entries must be submitted with a brief YouTube video, showcasing how the app works and illustrating its potential. A panel of judges, including representatives from Google and Ubuntu, further education institutions and business leaders, will then pick the overall winner next February.

To enter the contest, you may participate as an individual or as a team and you will need to be capable of developing a workable app using LMI for All data. For more information please visit the contest website at <http://careerhack.appchallenge.net/>

The closing date for entries is 5pm on Friday the 21st of February 2014.
You can find all the details you need to apply at <http://careerhack.appchallenge.net/>

Or find us on Twitter: @LMIforAll
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