



CS410 Project -- ExpertSearch System

BRUNO SEO


JOSEPH ANGULO

XIAOHAN LIU


Introduction

The ExpertSearch system is a webpage-based search engine that provides search function for faculty information.

Expert Search UIUC



Enter Search Query



Locations

e.g. United States, California

Universities

e.g. Stanford University

Apply Filters

Introduction

The search result of faculties will display in the order of relevance below.

Expert Search UIUC

big data mining

Seyed Ziae Mousavi

Area Of Interest: Data Mining

Computer Science, Wayne State University

Michigan, United States

...c++, python & r, database, **data mining**, algorithm design &...project, web programming research interests **data mining**, machine learning, image...processing, **big data**, **data analytics**

Reza Zafarani

Area Of Interest: Data Analytics

Computer Science, Syracuse University

New York, United States

...arizona state university research interests: **big data** analytics **data mining**.../ web **mining** / social media **mining**...lies in the intersection of **data mining**, machine learning, social

Another Sample Input

← → ↻ ⓘ localhost:8095

Expert Search UIUC

☰ data 🔍

Locations

Universities

e.g. United States, California

✕ University of Illinois in Chicago

Apply Filters

Philip S. Yu

Area Of Interest: Network Mining

✉ 📄

🏢 Computer Science, University of Illinois in Chicago 📍 Illinois, United States

...main research interests include big **data**, **data** mining (especially on...mining), social network, privacy preserving **data** publishing, **data** stream, database...fusion and anonymization of big **data** , the ieee computer

Elena Zheleva

Area Of Interest: Including Machine Learning

✉ 📄

🏢 Computer Science, University of Illinois in Chicago 📍 Illinois, United States

...years in industry as a **data** scientist, working on large-scale...personalization , incentivized sharing, and **data** science tools for journalists...i built and led the **data** science team at livingsocial,

Ouri Wolfson Richard

Area Of Interest: Database Systems

✉ 📄

🏢 Computer Science, University of Illinois in Chicago 📍 Illinois, United States

...inc. which specializes in mobile **data** management. he served as...2012 international conference on mobile **data** management (mdm), and peking...co-chair of the 2013 m...management (mdm) conference. his

Installation

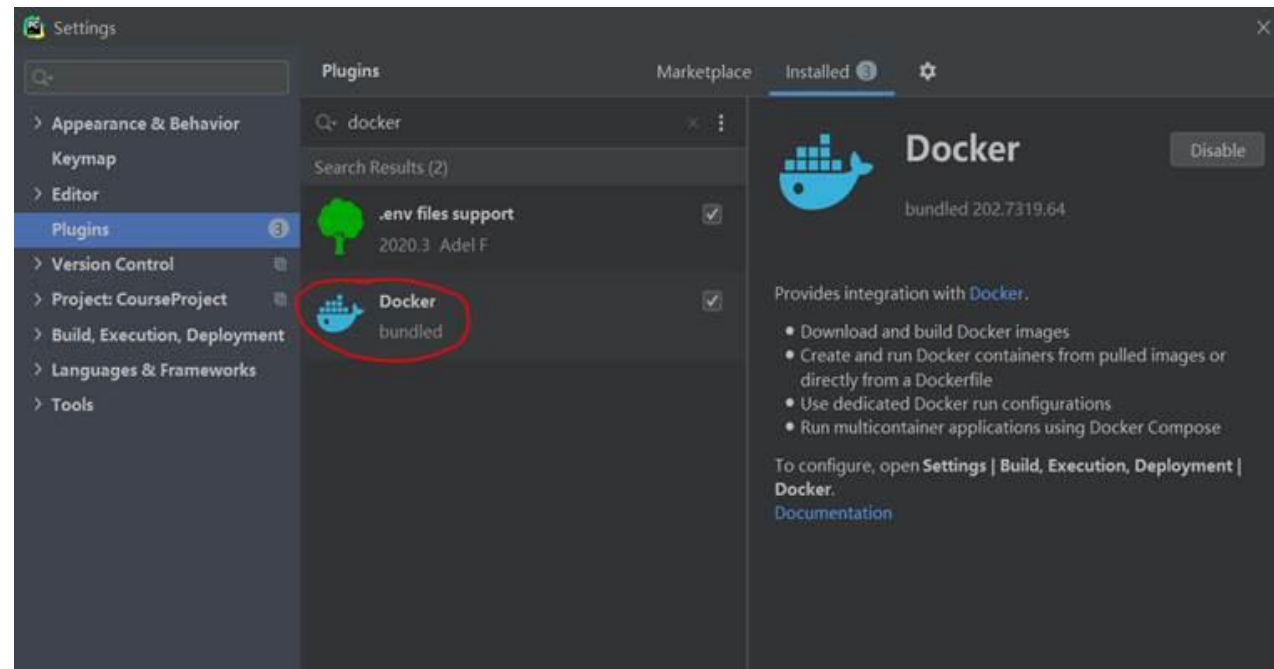
- It's extremely easy to install and run the code on Mac or Linux
- On Windows it requires some tricky settings to execute the code. This is because the Python webserver package Gunicorn doesn't support directly on Windows system, so Docker is required to run the code.

Installation on Windows

- ✓ Install Git (if you haven't)
- ✓ In the folder you want to save the project, right click -> Git Bash Here -> type: `git clone https://github.com/losaohan/CourseProject.git`
- ✓ Download and install Docker Desktop for Windows:
<https://hub.docker.com/editions/community/docker-ce-desktop-windows/>
- ✓ Download and install Pycharm Professional for Windows:
<https://www.jetbrains.com/pycharm/download/#section=windows>
- ✓ You need to apply an JetBrains account with your Illinois email to have access to the professional version: <https://www.jetbrains.com/shop/eform/students>.

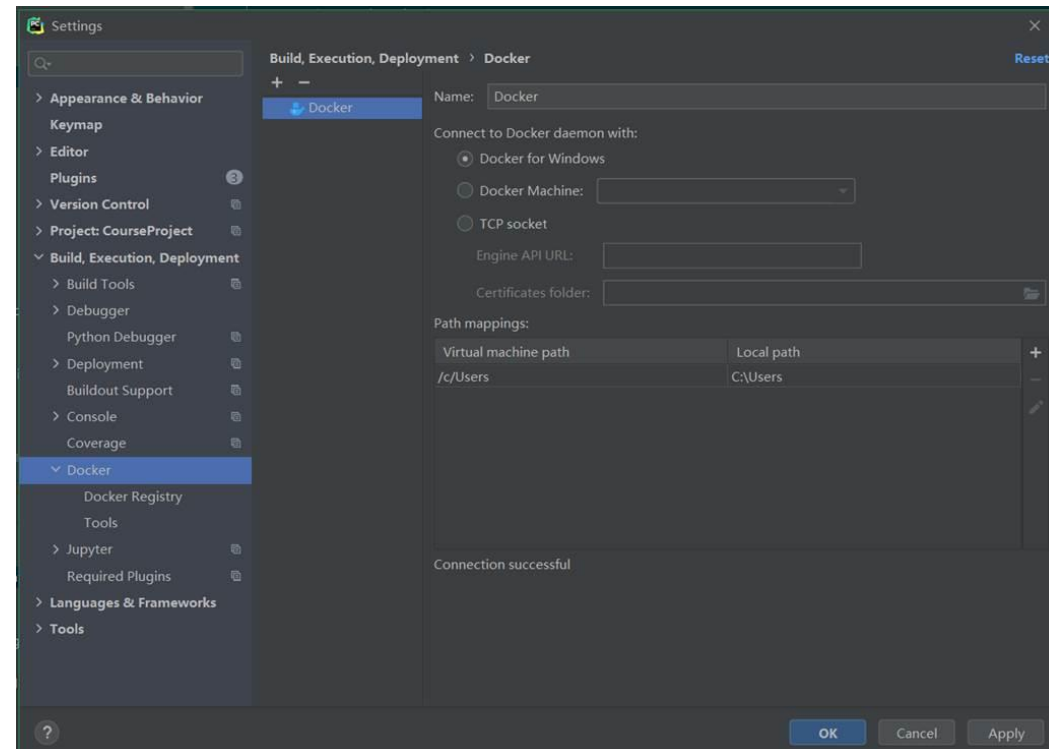
Installation on Windows

Open Pycharm, open the CourseProject folder as project. On the top-left menu, hit File -> Settings -> Plugins -> search for Docker, and install it -> make sure it's "Enabled":



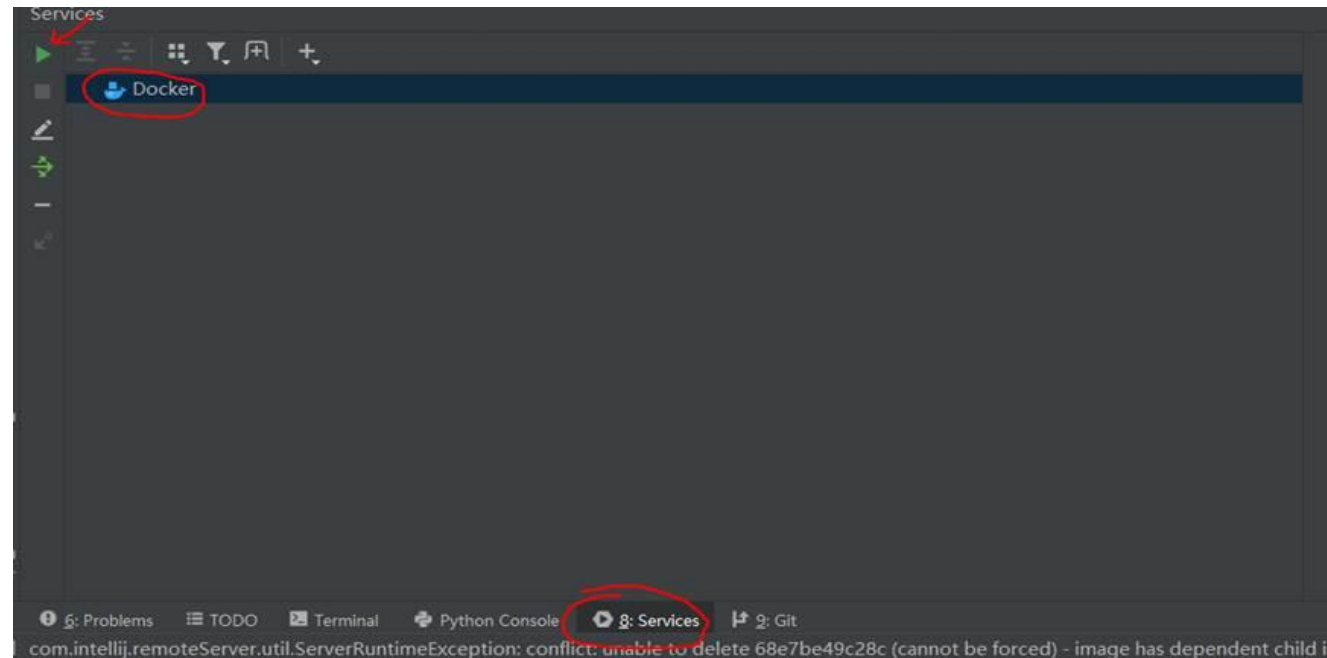
Installation on Windows

In the Settings -> Build, Execution, Deployment -> Docker, create a new Docker service as follows -> hit OK.



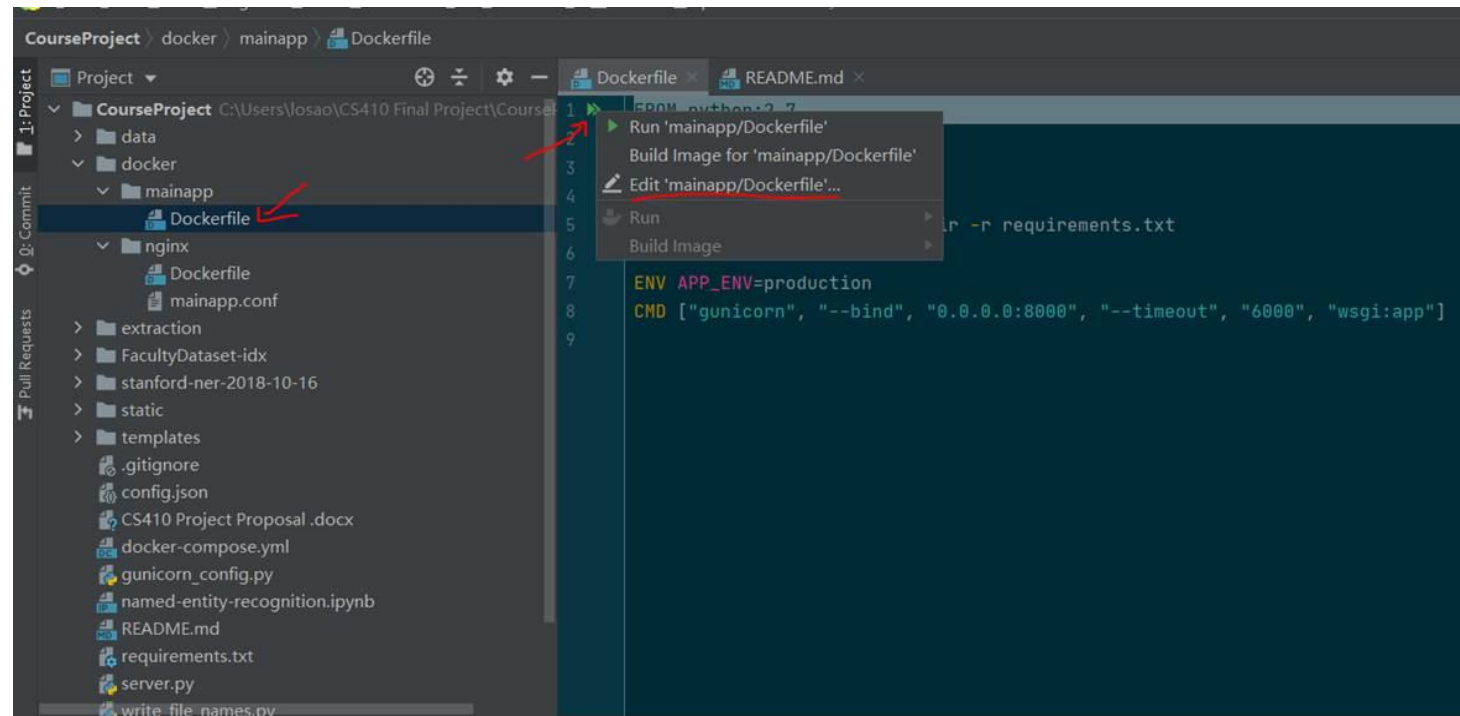
Installation on Windows

A new Docker service will appear on the bottom left menu. Make sure the Docker Desktop you installed in step 1 is running, and hit the green button “connect” on the top left: it will show “Connected” in the middle of the bottom window.



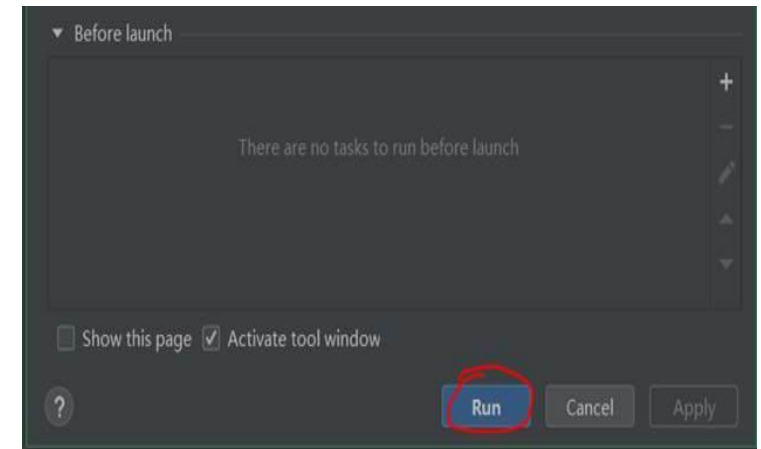
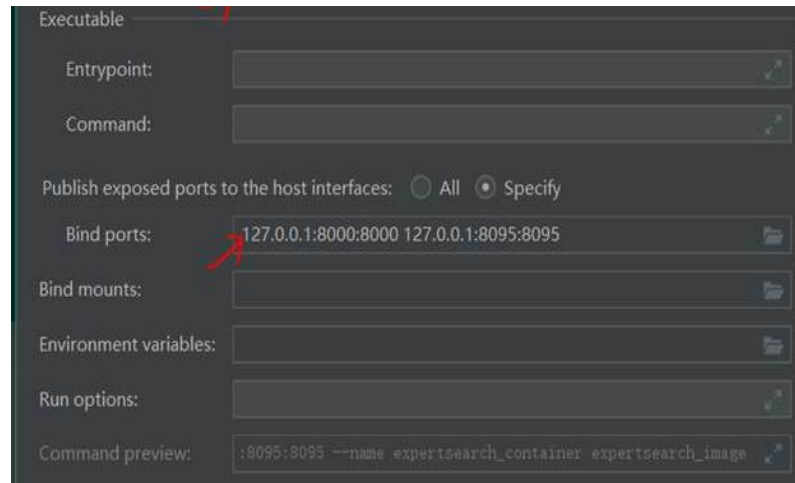
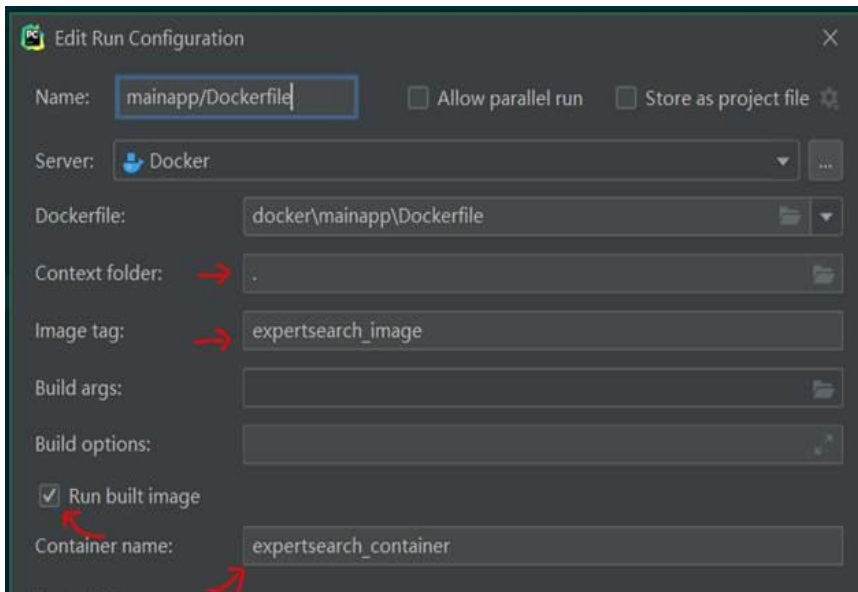
Installation on Windows

In the Project directory, open the file `docker/mainapp/Dockerfile`. Right click the double green arrow and select “Edit ‘mainapp/Dockerfile’...”.



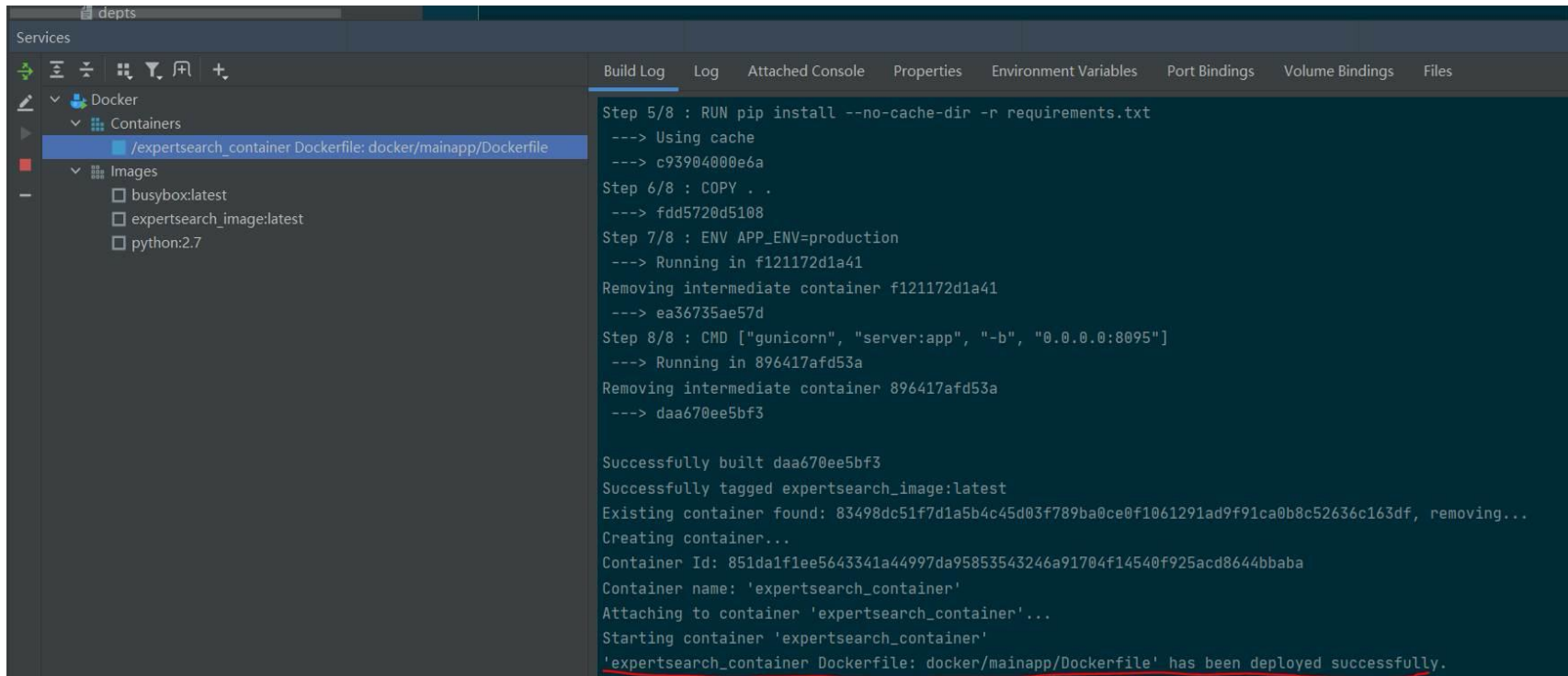
Installation on Windows

Fill in the same setting as below in the pop up config edit window. You could make your own Image Tag and Container Name, but make sure the other settings are the same.



Installation on Windows

Hit Run: the image will start to build, and the container will launch in a few seconds.



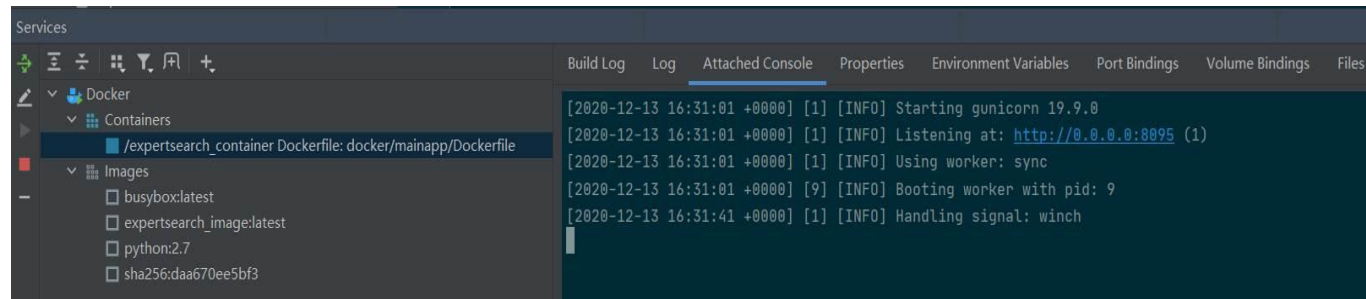
The screenshot shows the Docker Desktop interface. On the left, the 'Services' panel is open, showing a tree view with 'Docker' expanded, then 'Containers', and finally the selected service '/expertsearch_container Dockerfile: docker/mainapp/Dockerfile'. Below this, the 'Images' section lists 'busybox:latest', 'expertsearch_image:latest', and 'python:2.7'. The main panel on the right displays the 'Build Log' for the selected service. The log shows the following steps:

```
Step 5/8 : RUN pip install --no-cache-dir -r requirements.txt
----> Using cache
----> c93904000e6a
Step 6/8 : COPY . .
----> fdd5720d5108
Step 7/8 : ENV APP_ENV=production
----> Running in f121172d1a41
Removing intermediate container f121172d1a41
----> ea36735ae57d
Step 8/8 : CMD ["unicorn", "server:app", "-b", "0.0.0.0:8095"]
----> Running in 896417afd53a
Removing intermediate container 896417afd53a
----> daa670ee5bf3

Successfully built daa670ee5bf3
Successfully tagged expertsearch_image:latest
Existing container found: 83498dc51f7d1a5b4c45d03f789ba0ce0f1061291ad9f91ca0b8c52636c163df, removing...
Creating container...
Container Id: 851da1f1ee5643341a44997da95853543246a91704f14540f925acd8644bbaba
Container name: 'expertsearch_container'
Attaching to container 'expertsearch_container'...
Starting container 'expertsearch_container'
'expertsearch_container Dockerfile: docker/mainapp/Dockerfile' has been deployed successfully.
```

Installation on Windows

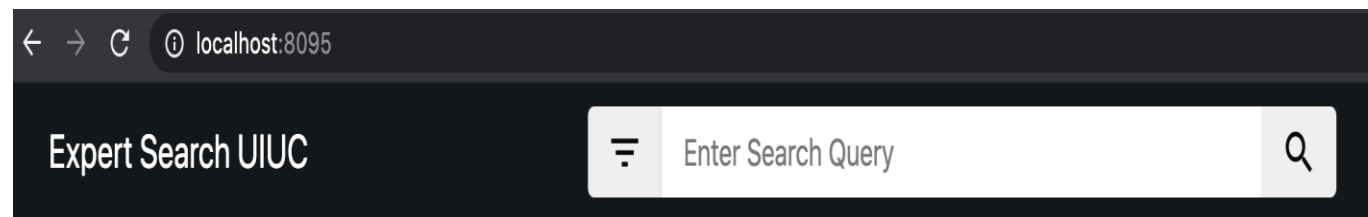
In the attached console, you will find the code is running at 0.0.0.0:8095 in the container, which is mapped to 127.0.0.1:8095 in the host machine.



The screenshot shows the Docker Desktop interface. On the left, the 'Containers' section is expanded, showing a container named '/expertsearch_container' with the Dockerfile 'docker/mainapp/Dockerfile'. On the right, the 'Attached Console' tab is active, displaying the following log output:

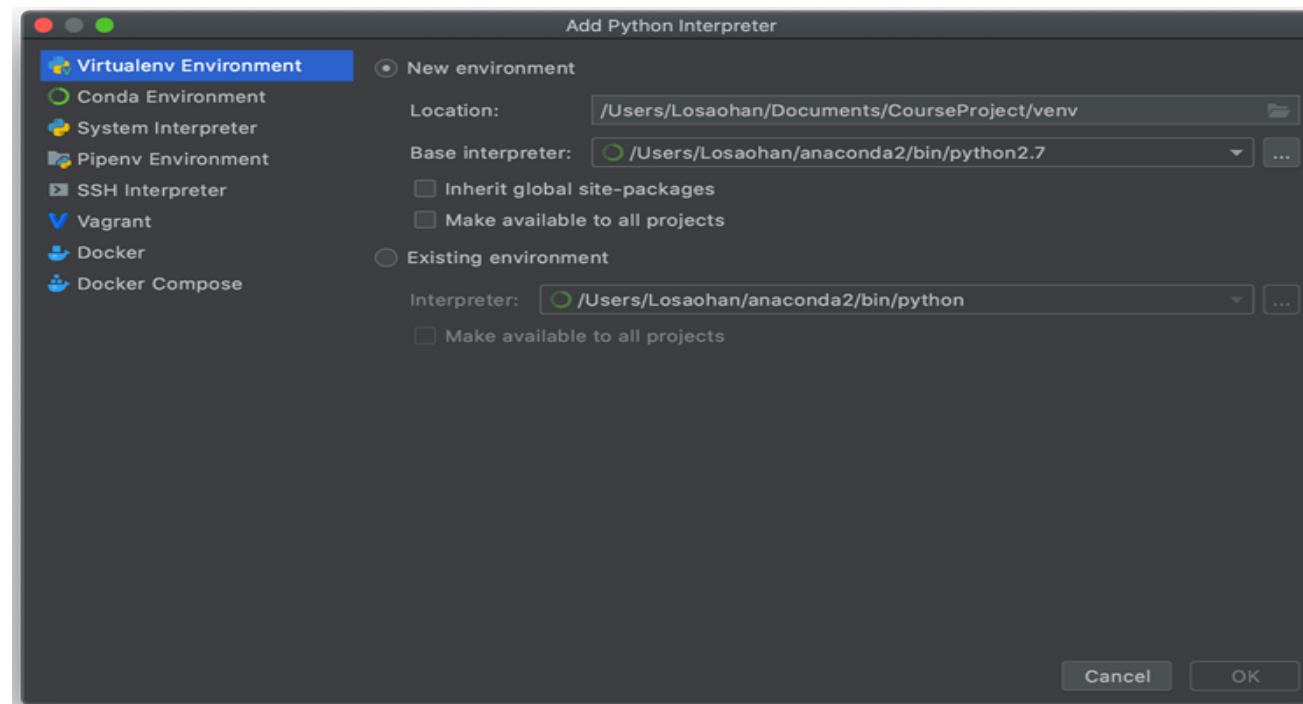
```
[2020-12-13 16:31:01 +0000] [1] [INFO] Starting gunicorn 19.9.0
[2020-12-13 16:31:01 +0000] [1] [INFO] Listening at: http://0.0.0.0:8095 (1)
[2020-12-13 16:31:01 +0000] [1] [INFO] Using worker: sync
[2020-12-13 16:31:01 +0000] [9] [INFO] Booting worker with pid: 9
[2020-12-13 16:31:41 +0000] [1] [INFO] Handling signal: winch
```

If you type localhost:8095 in your browser, the expert search page will show up



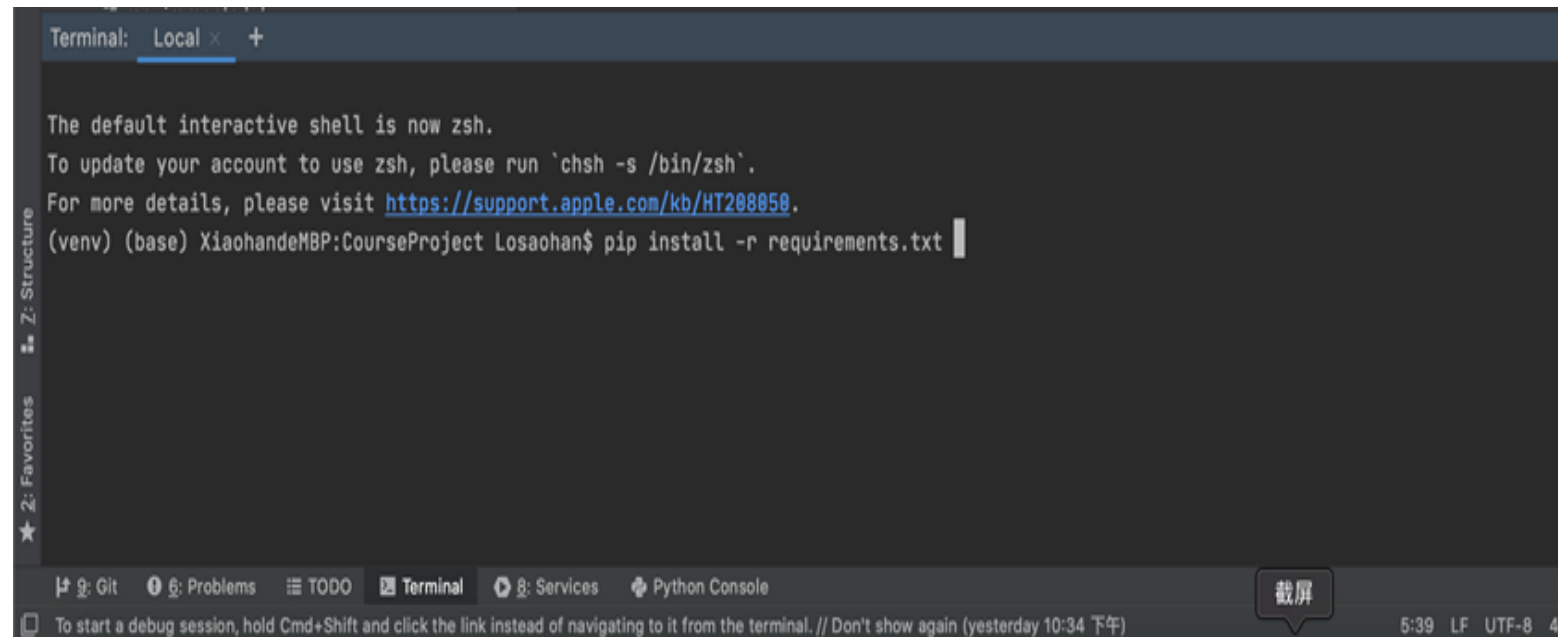
Installation on Mac/Linux

Open Pycharm, open the CourseProject folder as project. Create a new virtual env by choosing your local Python 2.7 as base interpreter.



Installation on Mac/Linux

In the activated virtual env, Install the requirements.txt packages by typing: `pip install -r requirements.txt`



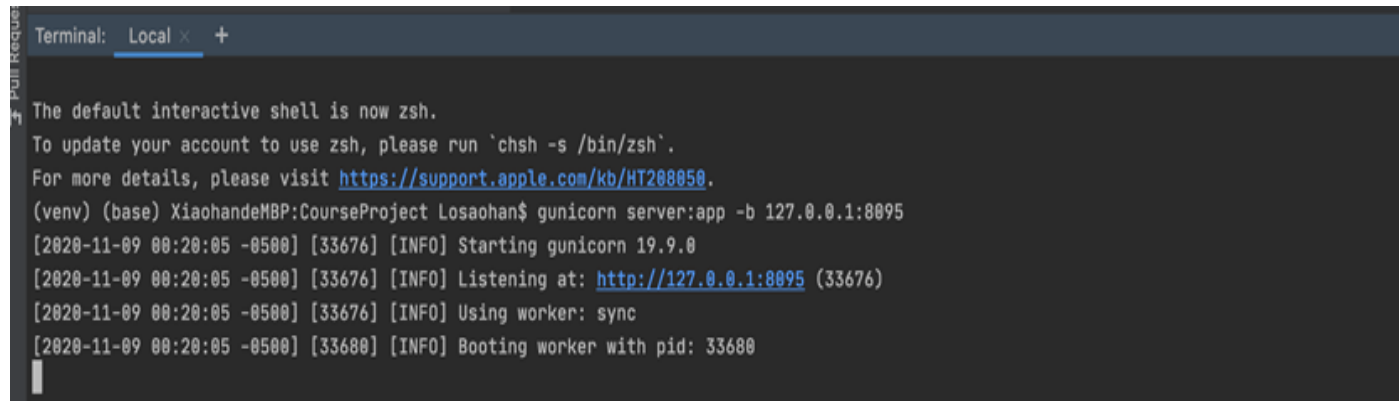
The screenshot shows a terminal window within an IDE. The terminal title is "Terminal: Local x +". The output text reads: "The default interactive shell is now zsh. To update your account to use zsh, please run 'chsh -s /bin/zsh'. For more details, please visit <https://support.apple.com/kb/HT208050>." The prompt is "(venv) (base) XiaohandeMBP:CourseProject Losaohan\$". The command being entered is "pip install -r requirements.txt". The IDE interface includes a sidebar on the left with "Structure" and "Favorites" views, and a bottom panel with tabs for "Git", "Problems", "TODO", "Terminal", "Services", and "Python Console". A status bar at the bottom shows "5:39 LF UTF-8 4". A "截屏" (Screenshot) button is visible in the bottom right corner of the terminal area.

```
Terminal: Local x +

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
(venv) (base) XiaohandeMBP:CourseProject Losaohan$ pip install -r requirements.txt
```

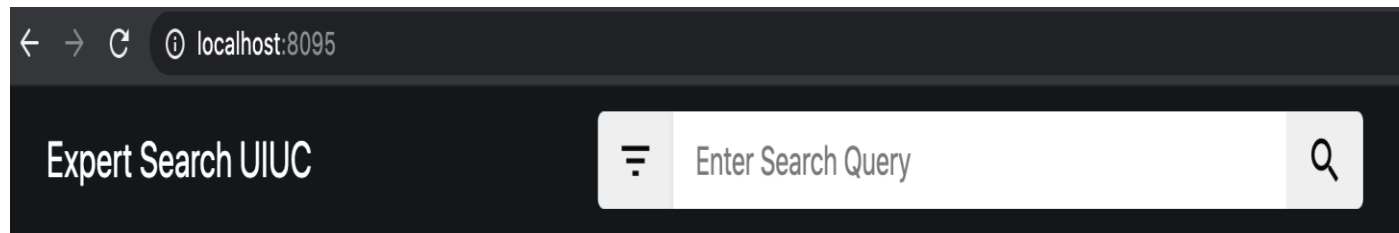
Installation on Mac/Linux

Type `gunicorn server:app -b 127.0.0.1:8095` in the terminal and the server will launch.

A terminal window with a dark background and light text. The title bar says "Terminal: Local x +". The text inside shows the default shell being updated to zsh, followed by the command to start gunicorn. The output shows gunicorn starting on port 8095 and booting a worker.

```
Terminal: Local x +  
The default interactive shell is now zsh.  
To update your account to use zsh, please run `chsh -s /bin/zsh`.  
For more details, please visit https://support.apple.com/kb/HT208850.  
(venv) (base) XiaohandeMBP:CourseProject Losaohan$ gunicorn server:app -b 127.0.0.1:8095  
[2020-11-09 00:20:05 -0500] [33676] [INFO] Starting gunicorn 19.9.0  
[2020-11-09 00:20:05 -0500] [33676] [INFO] Listening at: http://127.0.0.1:8095 (33676)  
[2020-11-09 00:20:05 -0500] [33676] [INFO] Using worker: sync  
[2020-11-09 00:20:05 -0500] [33680] [INFO] Booting worker with pid: 33680
```

Type `localhost:8095` in your browser, the expert search page will show up:



Thanks!