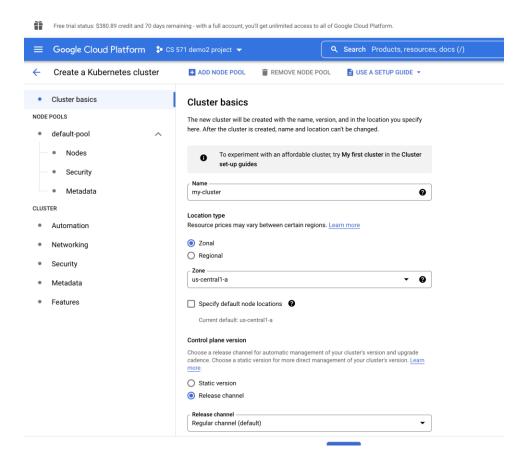
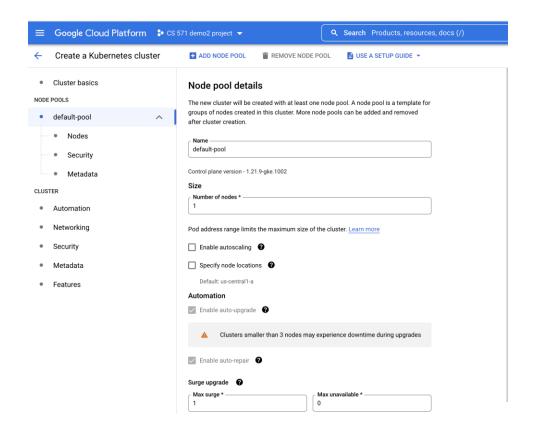
CS571 Advanced Cloud Computing

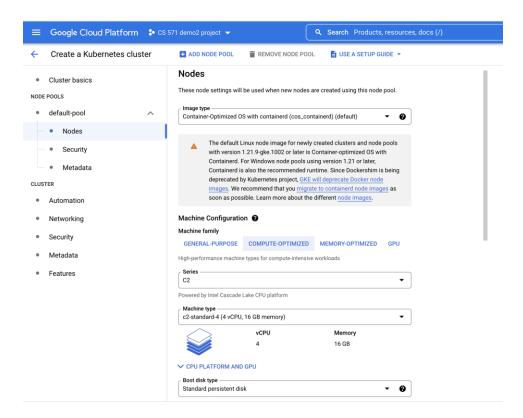
19615 Gayatri Kolekar

Wk 11 Homework: Signature Project: Automated Essay Scoring System

Create a new Kubernetes cluster







Connect to the cluster via command-line or using a dashboard

Configure kubectl command line access by running the following command:

gcloud container clusters get-credentials my-cluster -zone us-central1-a -project cs571-demo2-project

```
kolekar19615@cloudshell:~ (cs-571-demo2-project)$ gcloud container clusters get-credentials my-cluster -zone us-centrall -a --project cs-571-demo2-project

ERROR: (gcloud.container.clusters.get-credentials) unrecognized arguments:
-zone
us-centrall-a
--project
cs-571-demo2-project
To search the help text of gcloud commands, run:
gcloud help -- SEARCH_TERMS
```

Download the latest shell script

wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh

Make the miniconda installation script

executable chmod +x Miniconda3-latest-Linux-x86_64.sh

Run miniconda installation script

./Miniconda3-latest-Linux-x86_64.sh

```
kolekar19615@cloudshell:~ (cs-571-demo2-project)$ chmod +x Miniconda3-latest-Linux-x86_64.sh kolekar19615@cloudshell:~ (cs-571-demo2-project)$ ./Miniconda3-latest-Linux-x86_64.sh Welcome to Miniconda3 py39_4.11.0

In order to continue the installation process, please review the license agreement.
Please, press ENTER to continue
>>> []
```

```
Do you accept the license terms? [yes|no]
[no] >>> yes
Miniconda3 will now be installed into this location:
/home/kolekar19615/miniconda3
  - Press ENTER to confirm the location
  - Press CTRL-C to abort the installation
  - Or specify a different location below
[/home/kolekar19615/miniconda3] >>>
PREFIX=/home/kolekar19615/miniconda3
Unpacking payload ...
Collecting package metadata (current_repodata.json): done
Solving environment: done
## Package Plan ##
  environment location: /home/kolekar19615/miniconda3
  added / updated specs:
    - _libgcc_mutex==0.1=main
      openmp_mutex==4.5=1_gnu
    - brotlipy==0.7.0=py39h27cfd23_1003
```

Do you wish the installer to initialize Miniconda3 by running conda init? [yes|no] [no] >>> yes

Create and activate a Python environment

conda create -n myenv python=3.6

conda activate myenv

Create and activate a Python environment

conda create -n myenv python=3.6

conda activate myenv

```
(base) kolekar19615@cs-773365444975-default:~$ conda create -n myenv python=3.6
Collecting package metadata (current_repodata.json): done
Solving environment: done
==> WARNING: A newer version of conda exists. <==
  current version: 4.11.0
  latest version: 4.12.0
Please update conda by running
      $ conda update -n base -c defaults conda
## Package Plan ##
   environment location: /home/kolekar19615/miniconda3/envs/myenv
  added / updated specs:
     - python=3.6
The following packages will be downloaded:
                                                               build
      package
      ca-certificates-2022.3.29 | h06a4308_0 certifi-2020.6.20 | pyhd3eb1b0_3
                                                                                   117 KB

    ca-certificates-2022.3.29
    | notation

    certifi-2020.6.20
    | pyhd3eb1b0_3

    openss1-1.1.1n
    | h7f8727e_0

    pip-21.2.2
    | py36h06a4308_0

    python-3.6.13
    | h12debd9_1

    setuptools-58.0.4
    | py36h06a4308_0

    sqlite-3.38.2
    | hc218d9a_0

                                                                                   155 KB
                                                                                  2.5 MB
                                                                                   1.8 MB
                                                                                  32.5 MB
                                                                                   788 KB
                                                                                   1.0 MB
                                                              Total:
                                                                                  38.9 MB
```

Download the project from gibhub

```
(base) kolekar19615@cs-773365444975-default:-$ git clone https://github.com/Quan25/flask-summary.git final_project
Cloning into 'final_project'...
remote: Enumerating objects: 191, done.
remote: Counting objects: 100% (191/191), done.
remote: Compressing objects: 100% (136/136), done.
remote: Cotal 191 (delta 91), reused 148 (delta 51), pack-reused 0
Receiving objects: 100% (191/191), 710.58 KiB | 5.68 MiB/s, done.
Resolving deltas: 100% (91/91), done.
```

Type the following command to download rough.zip to your directory

wget --load-cookies /tmp/cookies.txt "https://docs.google.com/uc?export=download&confirm=\$(wget --quiet --savecookies /tmp/cookies.txt --keep-session-cookies --no-check-certificate 'https://drive.google.com/file/d/1RxfZOYyNvzvCf37_vABfJMkohAsEZKtH/' -O- | sed - rn 's/.confirm=([0-9A-Za-z_]+)./\1\n/p')&id=1RxfZOYyNvzvCf37_vABfJMkohAsEZKtH" -O rough.zip && rm -rf /tmp/cookies.txt

```
(base) kolekar19615@cs-773365444975-default:-/final_project$ wget --load-cookies /tmp/cookies.txt "https://docs.google.com/uc?e xport-download&confirm=&[wget --quiet --savecookies /tmp/cookies.txt --keep-session-cookies --no-check-certificate 'https://dri ve.google.com/file/d/lRxfZ0YNvzvCf37 vABfUNkohAsEZKH!" -O- | sed -rn 's/.confirm=([0-9A-Za-Z_]+)./\ln/p')&id=lRxfZ0YyNvzvCf3 yaBfUNkohAsEZKH!" -O rough.zip && rm -rf /tmp/cookies.txt wget: unrecognized option '--savecookies' Usage: wget [OPTION]... [URL]...

Try 'wget --help' for more options.
Cannot open cookies file '/tmp/cookies.txt': No such file or directory --2022-04-06 01:52:41-- https://docs.google.com/uc?export=download&confirm=&id=lRxfZ0YyNvzvCf37_vABfUNkohAsEZKtH Resolving docs.google.com (docs.google.com) (74.125.195.139, 74.125.195.139, 74.125.195.138, ...
Connecting to docs.google.com (docs.google.com) (74.125.195.139, 74.125.195.139, 74.25.195.138, ...
Connecting to docs.google.com (docs.google.com) (74.125.195.139, 74.31... connecting to docs.google.com-google.com) (74.125.195.139, 74.31... connecting to docs.google.com-google.com (07.125.195.139, 74.31... connecting the docs.google.com-google.com (74.125.195.139, 74.31... connecting the docs.google.com-google.com (74.125.795.139, 74.31... connecting the docs.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.google.
```

Unzip rough.zip

```
(base) kolekar19615@cs-773365444975-default:~/final_project$ unzip rough.zip
Archive: rough.zip
    creating: RELEASE-1.5.5/
    creating: RELEASE-1.5.5/data/
    creating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/
    inflating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/adj.exc
    inflating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/verb.exc
    inflating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/wordNet-2.0.exc.db
    inflating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/WordNet-2.0.exc.db
    inflating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/buildExeptionDB.pl
    inflating: RELEASE-1.5.5/data/WordNet-2.0-Exceptions/noun.exc
    inflating: RELEASE-1.5.5/data/WordNet-2.0.exc.db
    inflating: RELEASE-1.5.5/data/WordNet-2.0.exc.db
```

Install libxml-parser-perl, it is essential for installing ROUGE-1.5.5

sudo apt-get install libxml-parser-perl

```
(base) kolekar19615@cs-773365444975-default:~/final_project$ sudo apt-get install libxml-parser-perl

You are running apt-get inside of Cloud Shell. Note that your Cloud Shell
machine is ephemeral and no system-wide change will persist beyond session end.

To suppress this warning, create an empty ~/.cloudshell/no-apt-get-warning file.
The command will automatically proceed in 5 seconds or on any key.

Visit https://cloud.google.com/shell/help for more information.

Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
libauthen-sasl-perl libclone-perl libdata-dump-perl libntml-parser-perl libhtml-tagset-perl
libfont-afm-perl libhtml-form-perl libhtml-format-perl libhtml-parser-perl libhtml-tagset-perl
libhttp-negotiate-perl libio-html-perl libio-socket-ssl-perl liblwp-mediatypes-perl
liblwp-protocol-https-perl libmailtools-perl libnet-http-perl libnet-smtp-ssl-perl libnet-ssleay-perl
libtry-tiny-perl liburi-perl libwww-perl libwww-robotrules-perl perl-openssl-defaults
Suggested packages:
```

sudo cpan install XML::Parser::PerlSAX

sudo cpan install XML::RegExp

```
(base) kolekar19615@cs-773365444975-default:~/final project$ sudo cpan install XML::RegExp Loading internal logger. Log::Log4perl recommended for better logging Reading '/root/.cpan/Metadata'

Database was generated on Wed, 06 Apr 2022 01:17:02 GMT
Running install for module 'XML::RegExp'
Fetching with LWP:
http://www.cpan.org/authors/id/T/JJ/TJMATHER/XML-RegExp-0.04.tar.gz
Fetching with LWP:
http://www.cpan.org/authors/id/T/JJ/TJMATHER/CHECKSUMS
Checksum for /root/.cpan/sources/authors/id/T/JJ/TJMATHER/XML-RegExp-0.04.tar.gz ok
'YAML' not installed, will not store persistent state
Configuring T/JJ/TJMATHER/XML-RegExp-0.04.tar.gz with Makefile.PL
Checking if your kit is complete...
Looks good
Generating a Unix-style Makefile
Writing Makefile for XML::RegExp
Writing MYMETA.yml and MYMETA.json
TJMATHER/XML-RegExp-0.04.tar.gz
/usr/bin/perl Makefile.PL INSTALLDIRS=site -- OK
Running make for T/TJ/TJMATHER/XML-RegExp-0.04.tar.gz
cp lib/XML/RegExp.pm blib/lib/XML/RegExp.pm
Manifying 1 pod document
TJMATHER/XML-RegExp-0.04.tar.gz
/usr/bin/make -- OK
```

Sudo cpan install XML::DOM

```
(base) kolekar19615@cs-773365444975-default:~/final_project$ sudo cpan install XML::DOM
Loading internal logger. Log::Log4perl recommended for better logging
Reading '/root/.cpan/Metadata'

Database was generated on Wed, 06 Apr 2022 01:17:02 GMT
Running install for module 'XML::DOM'
Fetching with LWP:
http://www.cpan.org/authors/id/T/TJ/TJMATHER/XML-DOM-1.46.tar.gz
Checksum for /root/.cpan/sources/authors/id/T/TJ/TJMATHER/XML-DOM-1.46.tar.gz ok
'YAML' not installed, will not store persistent state
Configuring T/TJ/TJMATHER/XML-DOM-1.46.tar.gz with Makefile.PL
Checking if your kit is complete...
Looks good
Generating a Unix-style Makefile
Writing Makefile for XML::DOM
Writing MYMETA.yml and MYMETA.json
```

Make sure you can run this, which means the ROUGE is successfully installed ./runROUGE-test.pl

Install pyrouge

git clone https://github.com/bheinzerling/pyrouge.git

cd pyrouge

```
(base) kolekar19615@cs-773365444975-default:~/final_project$ git clone https://github.com/bheinzerling/py rouge.git
Cloning into 'pyrouge'...
remote: Enumerating objects: 551, done.
remote: Total 551 (delta 0), reused 0 (delta 0), pack-reused 551
Receiving objects: 100% (551/551), 123.17 KiB | 5.87 MiB/s, done.
Resolving deltas: 100% (198/198), done.
```

```
(base) kolekar19615@cs-773365444975-default:~/final_project$ cd pyrouge (base) kolekar19615@cs-773365444975-default:~/final_project/pyrouge$
```

pip install -e.

install pytorch 1.1.0 with this comand

conda install pytorch-cpu==1.1.0 torchvision-cpu==0.3.0 cpuonly -c pytorch

```
(base) kolekar19615@cs-773365444975-default:~/final_project/pyrouge$ pip install -e .

Obtaining file:///home/kolekar19615/final_project/pyrouge
Installing collected packages: pyrouge
Attempting uninstall: pyrouge
Found existing installation: pyrouge 0.1.3
Uninstalling pyrouge-0.1.3:
Successfully uninstalled pyrouge-0.1.3
Running setup.py develop for pyrouge
Successfully installed pyrouge-0.1.3
(base) kolekar19615@cs-773365444975-default:~/final_project/pyrouge$ conda activate myenv
(myenv) kolekar19615@cs-773365444975-default:~/final_project/pyrouge$ conda install pytorch-cpu==1.1.0 to rchvision-cpu==0.3.0 cpuonly -c pytorch
Collecting package metadata (current repodata.json): done
Solving environment: failed with initial frozen solve. Retrying with flexible solve.
```

Go back to your final project folder and download pretrained-bert-model

wget https://s3.amazonaws.com/models.huggingface.co/bert/bert-largeuncased.tar.gz

```
(myenv) kolekar19615@cs-773365444975-default:~$ wget https://s3.amazonaws.com/models.huggingface.co/bert/bert-largeuncased.tar.gz --2022-04-06 02:37:23-- https://s3.amazonaws.com/models.huggingface.co/bert/bert-largeuncased.tar.gz Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.217.79.158 Connecting to s3.amazonaws.com (s3.amazonaws.com)!52.217.79.158|:443... connected. HTTP request sent, awaiting response... 404 Not Found 2022-04-06 02:37:23 ERROR 404: Not Found.
```

Change the path in BertParent.py in summarizer folder

self.model = BertModel.from pretrained('YOUR PROJECT Directory/bert-largeuncased.tar.gz')

```
def __init__(self, model_type: str, size: str):
    #self.model = self.model_handler[model_type].from_pretrained(self.size_handler[size][model_type])
    self.model = BertModel.from_pretrained('/home/huangzz9511/final_project/bert-large-uncased.tar.gz')
    self.tokenizer = self.token_handler[model_type].from_pretrained(self.size_handler[size][model_type])
    self.vector_size = self.vector_handler[size][model_type]
    self.model_type = model_type
    self.model.eval()
```

Install all the following package

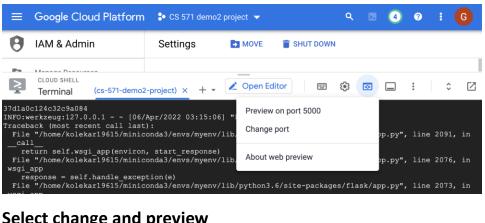
```
pip3 install flask
pip3 install pandas
pip3 install sklearn
pip3 install nltk
pip3 install gensim==3.8.3
pip3 install pytorch-pretrained-bert
pip3 install matplotlib==3.0.0
```

Download punkt package with nltk

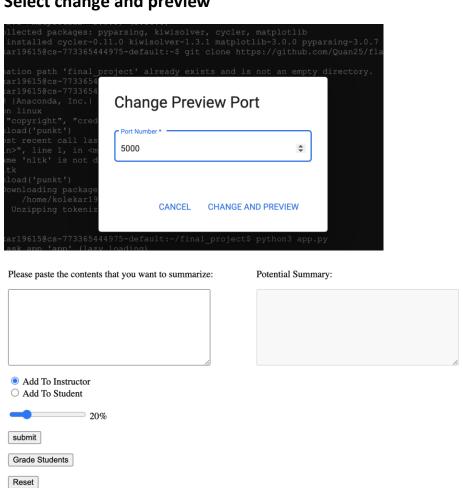
```
(myenv) kolekar19615@cs-773365444975-default:~$ cd final_project
(myenv) kolekar19615@cs-773365444975-default:~/final_project$ python3
Python 3.6.13 |Anaconda, Inc.| (default, Jun 4 2021, 14:25:59)
[GCC 7.5.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> nltk.download('punkt')
Traceback (most recent call last):
   File "<stdin>", line 1, in <module>
NameError: name 'nltk' is not defined
>>> import nltk
>>> nltk.download('punkt')
[nltk_data] Downloading package punkt to
[nltk_data] /home/kolekar19615/nltk_data...
[nltk_data] Unzipping tokenizers/punkt.zip.
True
>>> exit()
```

Run app.py

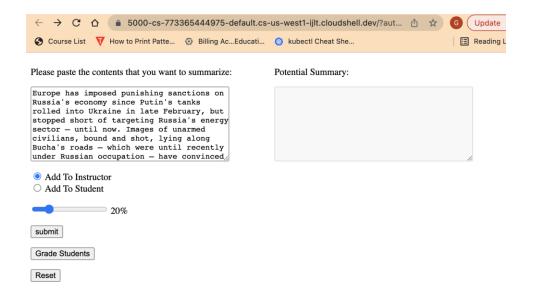
Use Web Preview and change the port number to 5000



Select change and preview



Test the app





AttributeError

AttributeError: 'NoneType' object has no attribute 'eval'

