

## Create a new Kubernetes cluster

### Cluster basics

The new cluster will be created with the name, version and in the location that you specify here. After the cluster is created, name and location can't be changed.



To experiment with an affordable cluster, try **My first cluster** in the **Cluster set-up guides**

Name

cluster-1



#### Location type

Resource prices may vary between certain regions. [Learn more](#)

☒ Zonal

☐ Regional

Zone

us-west1-a



☐ Specify default node locations

Current default: us-west1-a

#### Control plane version

Choose a release channel for automatic management of your cluster's version and upgrade cadence. Choose a static version for more direct management of your cluster's version. [Learn more](#).

☐ Static version

☒ Release channel

Release channel

Regular channel (default)



Version

1.21.6-gke.1503 (default)



These versions have passed internal validation and are considered production quality but don't have enough historical data to guarantee their stability. Known issues generally have known workarounds. [Release notes](#)

CREATE

CANCEL

Equivalent

REST

or

COMMAND LINE



- Cluster basics

## NODE POOLS

- default-pool

- Nodes
- Security
- Metadata

## CLUSTER

- Automation
- Networking
- Security
- Metadata
- Features

## Node pool details

The new cluster will be created with at least one node pool. A node pool is a template for groups of nodes created in this cluster. More node pools can be added and removed after cluster creation.

Name

default-pool

Control plane version – 1.21.6-gke.1503

### Size

Number of nodes \*

1

Pod address range limits the maximum size of the cluster. [Learn more](#)

☐ Enable auto-scaling ?☐ Specify node locations ?

Default: us-west1-a

### Automation

☒ Enable auto-upgrade ?

Clusters smaller than three nodes may experience downtime during upgrades

☒ Enable auto-repair ?

### Surge upgrade ?

Max. surge \*

1

Max. unavailable \*

0

←

Create a Kubernetes cluster

+ ADD NODE POOL

REMOVE NODE POOL

USE A SETUP GUIDE

Cluster basics

NODE POOLS

default-pool

Nodes

Security

Metadata

CLUSTER

Automation

Networking

Security

Metadata

Features

Nodes

These node settings will be used when new nodes are created using this node pool.

Image type

Container-Optimized OS with containerd (cos\_containerd) (default)

The default Linux node image for newly created clusters and node pools with version 1.21.6-gke.1503 or later is container-optimised OS with Containerd. For Windows node pools using version 1.21 or later, containerd is also the recommended runtime. Since Dockershim is being deprecated by the Kubernetes project, [GKE will deprecate Docker node images](#). We recommend that you [migrate to containerd node images](#) as soon as possible. Learn more about the different [node images](#).

Machine configuration

Machine family

GENERAL-PURPOSE

COMPUTE-OPTIMISED

MEMORY-OPTIMISED

Machine types for common workloads, optimised for cost and flexibility

Series

E2

CPU platform selection based on availability

Machine type

e2-standard-4 (4 vCPU, 16 GB memory)

vCPU

4

Memory

16 GB

CPU PLATFORM AND GPU

Boot disk type

Standard persistent disk

Boot disk size (GB)

100

☐ Enable customer-managed encryption for boot disk

CREATE

CANCEL

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or

COMMAND LINE

## Connect to the cluster

You can connect to your cluster via command-line or using a dashboard.

### Command-line access

Configure [kubectl](#) command line access by running the following command:

```
$ gcloud container clusters get-credentials cluster-1 --zone us-west1-a --project storied-polymer-343608
```

[RUN IN CLOUD SHELL](#)

### Cloud Console dashboard

You can view the workloads running in your cluster in the Cloud Console [Workloads dashboard](#).

[OPEN WORKLOADS DASHBOARD](#)

OK

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to storied-polymer-343608.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
zuowei880315@cloudshell:~ (storied-polymer-343608) $ gcloud container clusters get-credentials cluster-1 --zone us-west1-a --project storied-polymer-343608
Fetching cluster endpoint and auth data.
kubeconfig entry generated for cluster-1.
zuowei880315@cloudshell:~ (storied-polymer-343608) $
zuowei880315@cloudshell:~ (storied-polymer-343608) $
```

Download the latest shell script

wget [https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86\\_64.sh](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

```
zuowei880315@cloudshell:~ (storied-polymer-343608) $
zuowei880315@cloudshell:~ (storied-polymer-343608) $ wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh
--2022-04-11 06:22:12-- https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh
Resolving repo.anaconda.com (repo.anaconda.com)... 104.16.131.3, 104.16.130.3, 2606:4700::6810:8203, ...
Connecting to repo.anaconda.com (repo.anaconda.com)[104.16.131.3]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 75660608 (72M) [application/x-sh]
Saving to: 'Miniconda3-latest-Linux-x86_64.sh'

Miniconda3-latest-Linux-x86_64.sh      100%[=====>] 72.16M  93.6MB/s   in 0.8s

2022-04-11 06:22:13 (93.6 MB/s) - 'Miniconda3-latest-Linux-x86_64.sh' saved [75660608/75660608]

zuowei880315@cloudshell:~ (storied-polymer-343608) $ chmod +x Miniconda3-latest-Linux-x86_64.sh
zuowei880315@cloudshell:~ (storied-polymer-343608) $ ./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
>>> yes

End User License Agreement - Miniconda
```

```
Do you accept the license terms? [yes|no]
[no] >>> yes
```

```
Miniconda3 will now be installed into this location:
/home/zuowei880315/miniconda3
```

- Press ENTER to confirm the location
- Press CTRL-C to abort the installation
- Or specify a different location below

```
[/home/zuowei880315/miniconda3] >>>
PREFIX=/home/zuowei880315/miniconda3
Unpacking payload ...
```

```

Executing transaction: done
installation finished.
Do you wish the installer to initialize Miniconda3
by running conda init? [yes|no]
[no] >>> yes
no change      /home/zuowei880315/miniconda3/condabin/conda
no change      /home/zuowei880315/miniconda3/bin/conda
no change      /home/zuowei880315/miniconda3/bin/conda-env
no change      /home/zuowei880315/miniconda3/bin/activate
no change      /home/zuowei880315/miniconda3/bin/deactivate
no change      /home/zuowei880315/miniconda3/etc/profile.d/conda.sh
no change      /home/zuowei880315/miniconda3/etc/fish/conf.d/conda.fish
no change      /home/zuowei880315/miniconda3/shell/condabin/Conda.psml
no change      /home/zuowei880315/miniconda3/shell/condabin/conda-hook.ps1
no change      /home/zuowei880315/miniconda3/lib/python3.9/site-packages/xontrib/conda.xsh
no change      /home/zuowei880315/miniconda3/etc/profile.d/conda.csh
modified       /home/zuowei880315/.bashrc

==> For changes to take effect, close and re-open your current shell. <==

If you'd prefer that conda's base environment not be activated on startup,
set the auto_activate_base parameter to false:

conda config --set auto_activate_base false

Thank you for installing Miniconda3!
zuowei880315@cloudshell:~ (storied-polymer-343608) $

```

source ~/.bashrc

Create and activate a Python environment

conda create -n myenv python=3.6

conda activate myenv

```

(base) zuowei880315@cs-336364871752-default:~/final_project/RELEASE-1.5.5/pyrouge$ 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/zuowei880315/miniconda3/envs/myenv

  added / updated specs:
    - python=3.6

```

```

(base) zuowei880315@cs-336364871752-default:~/final_project/RELEASE-1.5.5/pyrouge$ conda activate myenv
(myenv) zuowei880315@cs-336364871752-default:~/final_project/RELEASE-1.5.5/pyrouge$
(myenv) zuowei880315@cs-336364871752-default:~/final_project/RELEASE-1.5.5/pyrouge$

```

git clone https://github.com/Quan25/flask-summary.git final\_project

```

zuowei880315@cloudshell:~ (storied-polymer-343608)$
zuowei880315@cloudshell:~ (storied-polymer-343608)$ 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: Total 191 (delta 91), reused 148 (delta 51), pack-reused 0
Receiving objects: 100% (191/191), 710.58 KiB | 11.84 MiB/s, done.
Resolving deltas: 100% (91/91), done.
zuowei880315@cloudshell:~ (storied-polymer-343608)$

```

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

```

zuowei880315@cloudshell:~/final_project (storied-polymer-343608)$ 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
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
--2022-04-11 06:30:15-- https://docs.google.com/uc?export=download&confirm=id=1RxfZOYyNvzvCf37_vABfJMkohAsEZKtH
Resolving docs.google.com (docs.google.com)... 74.125.195.101, 74.125.195.100, 74.125.195.113, ...
Connecting to docs.google.com (docs.google.com)|74.125.195.101|:443... connected.
HTTP request sent, awaiting response... 303 See Other
Location: https://doc-14-a0-docs.googleusercontent.com/docs/securesc/ha0ro937gcuc717deffksulhg5h7mbpl/5nggae81f2hjapo220kqok3kb58jrlpe/1649658600000/0959104963610272091/*1RxfZOYyNvzvCf37_vABfJMkohAsEZKtH?e=download [following]
Warning: wildcards not supported in HTTP.
--2022-04-11 06:30:19-- https://doc-14-a0-docs.googleusercontent.com/docs/securesc/ha0ro937gcuc717deffksulhg5h7mbpl/5nggae81f2hjapo220kqok3kb58jrlpe/1649658600000/0959104963610272091/*1RxfZOYyNvzvCf37_vABfJMkohAsEZKtH?e=download
Resolving doc-14-a0-docs.googleusercontent.com (doc-14-a0-docs.googleusercontent.com)... 74.125.142.132, 2607:f8b0:400e:c08::84
Connecting to doc-14-a0-docs.googleusercontent.com (doc-14-a0-docs.googleusercontent.com)|74.125.142.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3916745 (3.7M) [application/zip]
Saving to: 'rough.zip'

rough.zip                               100%[=====] 3.73M  --.-KB/s  in 0.05s

2022-04-11 06:30:20 (79.9 MB/s) - 'rough.zip' saved [3916745/3916745]

```

unzip rough.zip

```

zuowei880315@cloudshell:~/final_project (storied-polymer-343608)$
zuowei880315@cloudshell:~/final_project (storied-polymer-343608)$ 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/adv.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/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-1.6.exc.db
  inflating: RELEASE-1.5.5/data/smart_common_words.txt
  creating: RELEASE-1.5.5/data/WordNet-1.6-Exceptions/

```

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

sudo apt-get install libxml-parser-perl

```

zuowei880315@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343608)$
zuowei880315@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343608)$ 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 libencode-locale-perl libfile-listing-perl libfont-afm-perl libhtml-form-perl libhtml-format-perl libhtml-parser-perl
  libhtml-tagset-perl libhtml-tree-perl libhttp-cookies-perl libhttp-daemon-perl libhttp-date-perl libhttp-message-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 libruby-tiny-perl liburi-perl
  libwww-perl libwww-robotrules-perl perl openssl-defaults
Suggested packages:
  libdigest-hmac-perl libgssapi-perl libcrypt-ssleay-perl libauthen-ntlm-perl
The following NEW packages will be installed:
  libauthen-sasl-perl libclone-perl libdata-dump-perl libencode-locale-perl libfile-listing-perl libfont-afm-perl libhtml-form-perl libhtml-format-perl libhtml-parser-perl
  libhtml-tagset-perl libhtml-tree-perl libhttp-cookies-perl libhttp-daemon-perl libhttp-date-perl libhttp-message-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 libruby-tiny-perl liburi-perl
  libwww-perl libwww-robotrules-perl libxml-parser-perl perl openssl-defaults
0 upgraded, 39 newly installed, 0 to remove and 14 not upgraded.
Need to get 1,914 kB of archives.
After this operation, 5,609 kB of additional disk space will be used.
Do you want to continue? [Y/n] y

```

## sudo cpan install XML::Parser::PerlSAX

```

zuowei880315@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343608)$
zuowei880315@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343608)$ sudo cpan install XML::Parser::PerlSAX
Loading internal logger. Log::Log4perl recommended for better logging

CPAN.pm requires configuration, but most of it can be done automatically.
If you answer 'no' below, you will enter an interactive dialog for each
configuration option instead.

Would you like to configure as much as possible automatically? [yes] y
Fetching with LWP:
http://www.cpan.org/authors/01mailrc.txt.gz
Reading '/root/.cpan/sources/authors/01mailrc.txt.gz'
.....DONE
Fetching with LWP:
http://www.cpan.org/modules/02packages.details.txt.gz
Reading '/root/.cpan/sources/modules/02packages.details.txt.gz'
Database was generated on Mon, 11 Apr 2022 00:17:02 GMT
.....

```

## sudo cpan install XML::RegExp

```

zuowei880315@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343608)$
zuowei880315@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343608)$ sudo cpan install XML::RegExp
Loading internal logger. Log::Log4perl recommended for better logging
Reading '/root/.cpan/Metadata'
Database was generated on Mon, 11 Apr 2022 00:17:02 GMT
Running install for module 'XML::RegExp'
Fetching with LWP:
http://www.cpan.org/authors/id/T/TJ/TJMATHER/XML-RegExp-0.04.tar.gz
Fetching with LWP:
http://www.cpan.org/authors/id/T/TJ/TJMATHER/CHECKSUMS
Checksum for /root/.cpan/sources/authors/id/T/TJ/TJMATHER/XML-RegExp-0.04.tar.gz ok
'YAML' not installed, will not store persistent state
Configuring T/TJ/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

```

## sudo cpan install XML::DOM

Make sure you can run this, which means the ROUGE is successfully installed

```

zuowe189031@cloudshell:~/final_project/RELEASE-1.5.5 (storied-polymer-343600)$ ./runROUGE-test.pl
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -a -m ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-a.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -a -m ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-r1000-n4-w1.2-a-m.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -a -m -s ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-a-m-s.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -1.0 -a -m ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-1.10-a.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -1.0 -a -m ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-1.10-a-m.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -1.0 -a -m -s ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-1.10-a-m-s.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -b.75 -a -m ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-b75-a.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -b.75 -a -m ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-b75-a-m.out
./ROUGE-1.5.5.pl -e ./data -c 95 -2 -1 -U -R 1000 -n 4 -w 1.2 -b.75 -a -m -s ROUGE-test.xml > ./sample-output/ROUGE-test-c95-2-1-U-R1000-n4-w1.2-b75-a-m-s.out
./ROUGE-1.5.5.pl -e ./data -c 3 -H -z SIMPLE DUC2002-BE-F.in.26.list.26 > ./sample-output/DOC2002-BE-F.in.26.list.out
./ROUGE-1.5.5.pl -e ./data -c 3 -H DUC2002-BE-F.in.26.simple.xml.26 > ./sample-output/DOC2002-BE-F.in.26.simple.out
./ROUGE-1.5.5.pl -e ./data -c 3 -H -z SIMPLE DUC2002-BE-L.in.26.list.26 > ./sample-output/DOC2002-BE-L.in.26.list.out
./ROUGE-1.5.5.pl -e ./data -c 3 -H DUC2002-BE-L.in.26.simple.xml.26 > ./sample-output/DOC2002-BE-L.in.26.simple.out
./ROUGE-1.5.5.pl -e ./data -n 4 -z SPL DUC2002-ROUGE.in.26.sppl.list.26 > ./sample-output/DOC2002-ROUGE.in.26.sppl.list.out

```

```
cd pyrouge
```

```
pip install -e .
```

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

```
(myenv) zuowe1880315@cs-336364871752-default:~/final_project/RELEASE-1.5.5/pyrouge$
(myenv) zuowe1880315@cs-336364871752-default:~/final_project/RELEASE-1.5.5/pyrouge$ conda install pytorch-cpu==1.1.0 torchvision-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.
Solving environment: failed with repodata from current_repodata.json, will retry with next repodata source.
Collecting package metadata (repodata.json): done
Solving environment: |
```



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

```
cd ~/final_project
```

```
wget https://s3.amazonaws.com/models.huggingface.co/bert/bert-large-uncased.tar.gz
```

```
(myenv) zuowei880315@cs-336364871752-default:~/final_project$ wget https://s3.amazonaws.com/models.huggingface.co/bert/bert-large-uncased.tar.gz
--2022-04-11 06:49:50-- https://s3.amazonaws.com/models.huggingface.co/bert/bert-large-uncased.tar.gz
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.216.100.117
Connecting to s3.amazonaws.com (s3.amazonaws.com) [52.216.100.117]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1248501532 (1.2G) [application/x-tar]
Saving to: 'bert-large-uncased.tar.gz'

bert-large-uncased.tar.gz      100%[=====>] 1.16G  45.4MB/s  in 33s

2022-04-11 06:50:24 (36.4 MB/s) - 'bert-large-uncased.tar.gz' saved [1248501532/1248501532]

(myenv) zuowei880315@cs-336364871752-default:~/final_project$
```

Change the path in BertParent.py in summarizer folder

```
vim ~/final_project/summarizer/BertParent.py
```

```
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/zuowei880315/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
```

```
(myenv) zuowei880315@cs-336364871752-default:~/final_project$
(myenv) zuowei880315@cs-336364871752-default:~/final_project$ 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
Collecting flask
  Downloading Flask-2.0.3-py3-none-any.whl (95 kB)
  |#####| 95 kB 1.7 MB/s
Collecting click>=7.1.2
  Downloading click-8.0.4-py3-none-any.whl (97 kB)
  |#####| 97 kB 6.6 MB/s
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.0.1-py3-none-any.whl (18 kB)
Collecting Jinja2>=3.0
  Downloading Jinja2-3.0.3-py3-none-any.whl (133 kB)
  |#####| 133 kB 46.3 MB/s
```

Download punkt package with nltk

```
python3
```

```
import nltk
```

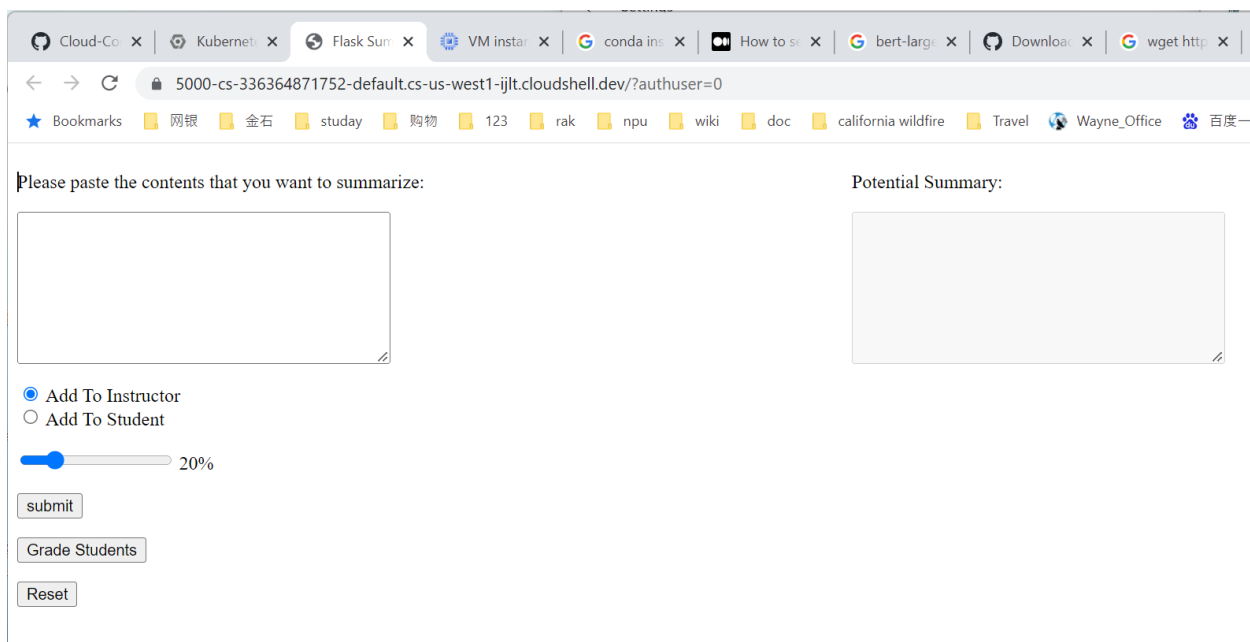
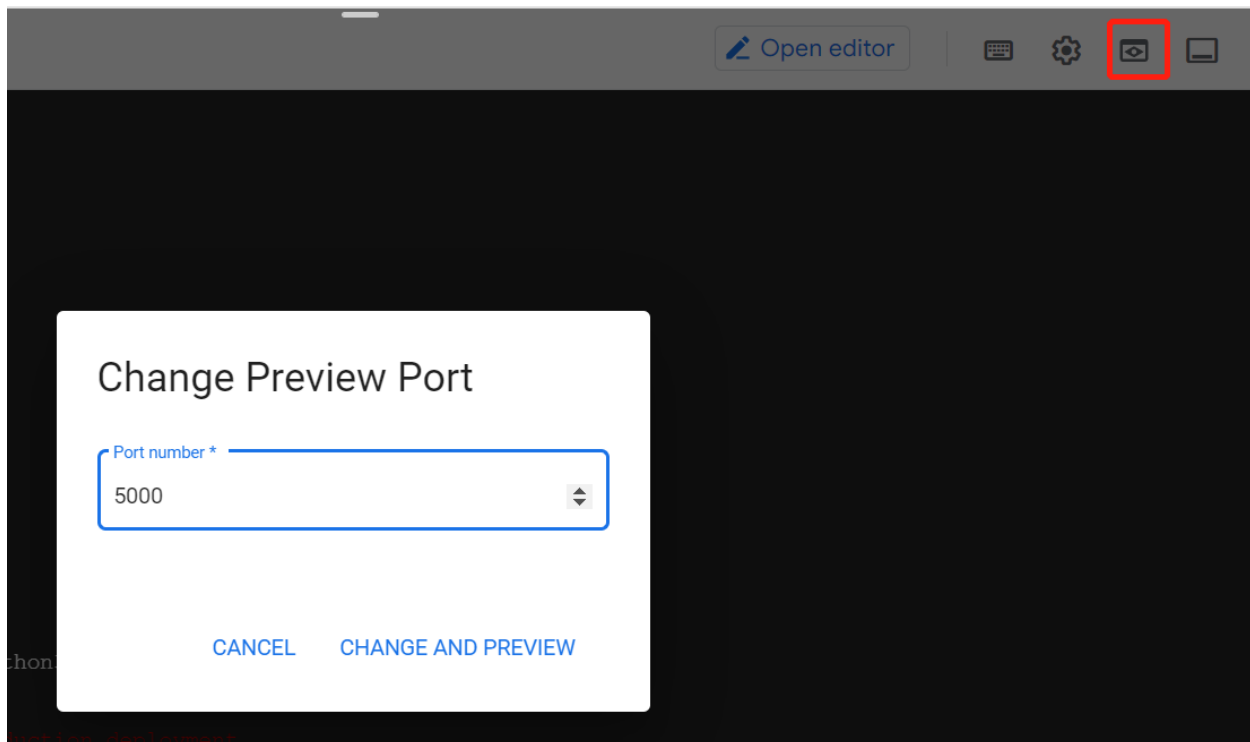
```
nltk.download('punkt')
```

```
(myenv) zuowei880315@cs-336364871752-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.
>>>
>>> import nltk
>>> nltk.download('punkt')
[nltk_data] Downloading package punkt to
[nltk_data]      /home/zuowei880315/nltk_data...
[nltk_data]   Unzipping tokenizers/punkt.zip.
True
>>> exit
Use exit() or Ctrl-D (i.e. EOF) to exit
>>> █
```

run app.py

```
(myenv) zuowei880315@cs-336364871752-default:~/final_project$
(myenv) zuowei880315@cs-336364871752-default:~/final_project$ python3 app.py
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
WARNING:werkzeug: * Running on all addresses.
  WARNING: This is a development server. Do not use it in a production deployment.
INFO:werkzeug: * Running on http://172.17.0.4:5000/ (Press CTRL+C to quit)
INFO:werkzeug: * Restarting with stat
WARNING:werkzeug: * Debugger is active!
INFO:werkzeug: * Debugger PIN: 942-723-167
█
```

Use Web Preview and change the port number to 5000



```

CLOUD SHELL
Terminal (stored-polymer-343608) x + v
Open editor
o until the next presidential election.\r\n\r\nAnd Russian efforts to sow discord during the 2016 election are still fresh in many minds within the beltway.\r\n\r\nDuring the heated 2016 presidential race, Russian actors launched a sweeping interference campaign that aimed to flame divisiveness and sway the election toward now-President Trump.\r\n\r\n\r\nThe U.S. used a multipronged approach, including targeting election infrastructure in all 50 states, pushing out misinformation on social media, and hacking the Democratic National Committee as well as other campaign-related email accounts.\r\n\r\n\r\nExperts also observed AP29 carrying out a widespread phishing campaign following the 2018 midterm elections after the House flipped to a Democrat majority, in which the U.S. federal government, media outlets and think tanks were targeted.\r\n\r\n\r\nSecretary of State Mike Pompeo this week noted that his "confident" foreign adversaries, including Russia, would attempt to interfere in elections this year, while also emphasizing that the Trump administration was aware of the threat.\r\n\r\n\r\nThe American people should rest assured that whether it's Chinese interference, Iranian interference, Russian interference, or North Korean interference, any country, or even non-state actors who now have capabilities to try to meddle in our elections, know that this administration takes seriously its responsibility to make sure every American's vote is counted, counted properly, and that foreign influence is minimized," Pompeo said during a virtual event hosted by The Hill.). ('add', 'Add To Instructor'), ('ratio', '2.0'])
INFO:pytorch_pretrained_bert.modeling:loading archive file /home/zuowei1880315/final_project/bert-large-uncased.tar.gz
INFO:pytorch_pretrained_bert.modeling:extracting archive file /home/zuowei1880315/final_project/bert-large-uncased.tar.gz to temp dir /tmp/tmp0i4mfkdm
INFO:pytorch_pretrained_bert.modeling:Model config {
  "attention_probs_dropout_prob": 0.1,
  "hidden_act": "gelu",
  "hidden_dropout_prob": 0.1,
  "hidden_size": 1024,
  "initializer_range": 0.02,
  "intermediate_size": 4096,
  "max_position_embeddings": 512,
  "num_attention_heads": 16,
  "num_hidden_layers": 24,
  "type_vocab_size": 2,
  "vocab_size": 30522
}
INFO:pytorch_pretrained_bert.file_utils:https://s3.amazonaws.com/models.huggingface.co/bert/bert-large-uncased-vocab.txt not found in cache, downloading to /tmp/tmp37rv649
100%
INFO:pytorch_pretrained_bert.file_utils:copying /tmp/tmp37rv649 to cache at /home/zuowei1880315/.pytorch_pretrained_bert/9b3c03a36e83b13d5ba95ac965cf9074a99e14340c523ab405703179e79fc46.542cc428540d23a559526243235df47c5f75c197f04f37d1a0c124c32c9a084
INFO:pytorch_pretrained_bert.file_utils:creating metadata file for /home/zuowei1880315/.pytorch_pretrained_bert/9b3c03a36e83b13d5ba95ac965cf9074a99e14340c523ab405703179e79fc46.542cc428540d23a559526243235df47c5f75c197f04f37d1a0c124c32c9a084
INFO:pytorch_pretrained_bert.file_utils:removing temp file /tmp/tmp37rv649
INFO:pytorch_pretrained_bert.tokenization:loading vocabulary file https://s3.amazonaws.com/models.huggingface.co/bert/bert-large-uncased-vocab.txt from cache at /home/zuowei1880315/

```



## Instructor Essay Summary

- Instructor:

**Essay Summary:** Russia is facing renewed scrutiny over its cyber espionage efforts after the U. S., Great Britain and Canada alleged Thursday that a Kremlin-linked hacking group is attempting to steal research related to coronavirus vaccine developments and testing. According to cybersecurity group CrowdStrike, the group was also one of two Russian cells that hacked into Democratic National Committee networks between 2015 and 2016 in the lead up to the presidential election. The United Kingdom's National Cyber Security Centre (NCSC) first revealed the findings in a report posted online Thursday that warned APT29 has targeted research and development organizations in the U. K., U. S. and Canada using a variety of tools, including spear-phishing techniques and custom malware to help in their hacking attempts. "Moving forward, the United States and the western world need to be prepared for increasingly aggressive cyber-attacks from Russian actors. "I wish I could say I was surprised, but I'm not," said Payton, CEO of cybersecurity consultancy group Fortalice Solutions. "I don't believe that Russia will be the only one to conduct those campaigns. "APT29 is considered a savvy, active and persistent hacking group that is known for its espionage efforts and top intelligence officials are warning to take the threat seriously. "APT29 has a long history of targeting governmental, diplomatic, think-tank, healthcare and energy organizations for intelligence gain so we encourage everyone to take this threat seriously and apply the mitigations issued in the advisory," National Security Agency Cybersecurity Director Anne Neuberger said in a statement. NCSC warned that governments, the diplomatic corps, the health care industry, energy sector, and think tanks and other research organizations are among the targets. The joint alert on Thursday was not the first effort by top security agencies to sound the alarm on foreign espionage threats against COVID-19 vaccine development efforts. "These actors have been observed attempting to identify and illicitly obtain valuable intellectual property and public health data related to vaccines, treatments, and testing from networks and personnel affiliated with COVID-19-related research," the agencies warned in the alert.

**Student Grade Rank (From High to Low)**

## Student Score Percentile

Name	Student 2	Student 1	Student 3	Student 4
student percentile	1.0	0.75	0.5	0.25

- Student Name: Student 2

**Essay Summary:** the first us deaths related to coronavirus might have occurred weeks earlier than previously thought

- Student Name: Student 1

Essay Summary: the contagious respiratory illness continues to spread worldwide. health and government officials have asked every one of us to help slow the spread in our communities

- Student Name: Student 3

Essay Summary: the cdc recommend that all people wear cloth face masks in public places where it is difficult to maintain a 6-foot (2-meter) distance from others. this will help slow the spread of the virus from asymptomatic people and people who do not know that they have contracted it.

- Student Name: Student 4

Essay Summary: the entire speech requires about 10 minutes to read. there are two sections i wish to draw to your attention. the first principle is that you must not fool yourself