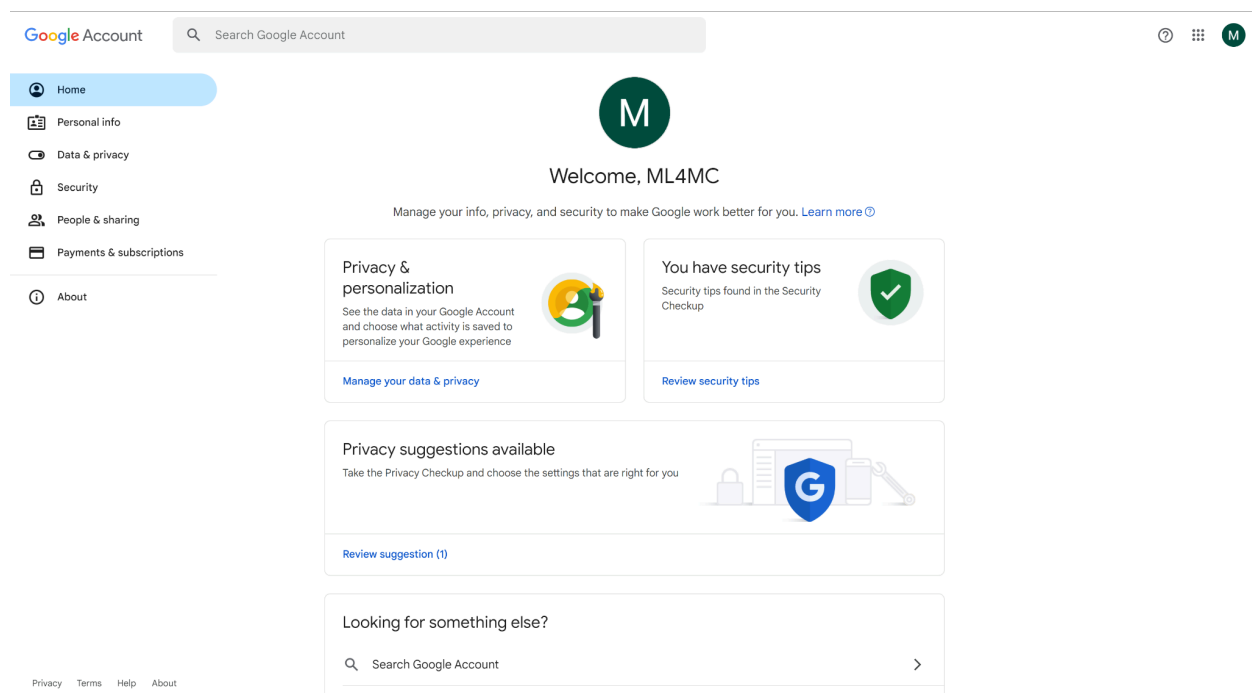


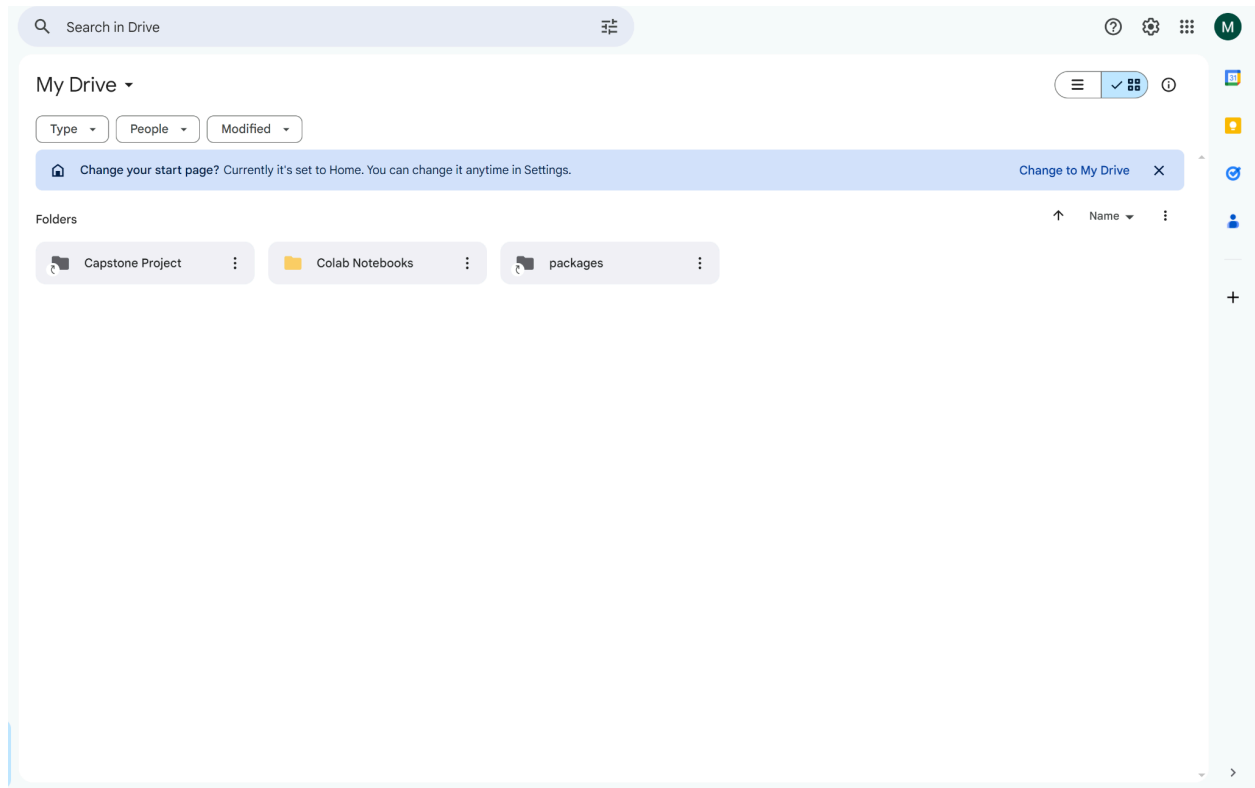
Requirement 34: Set up a team Google Colab account, and request funds for paying for the "pro" version.

Description: As of now, we've been primarily relying on the free version of Colab for training and testing purposes, as many of the tasks we were initially training for (such as stone and wood collection) did not require an extensive amount of processing power to train high quality models. However, from our initial foray into iron ore collection, it has become increasingly obvious to us that we will need to upgrade to a paid version of Colab for training models for these more complicated tasks. Completion of this task will involve providing the account information for our shared account, and showing a submitted form for funding or a receipt for purchasing a month of Colab Pro. This requirement is contingent on the EECS department approving our request within this sprint.

Completion Documentation:

The team Google Colab account has been created, with the name ML4MC:






And it was tested under the free version by running the Iron Train and Test notebook:






```
ML4MC_Iron_Train_and_Test.ipynb ☆
File Edit View Insert Runtime Tools Help Save failed
+ Code + Text
Reconnect 14 Colab AI ^

Iteration 2000, Loss 1.023
Iteration 3000, Loss 0.846
Iteration 4000, Loss 0.875
Iteration 5000, Loss 0.787
Iteration 6000, Loss 0.994
Iteration 7000, Loss 0.880
Iteration 8000, Loss 0.915
Iteration 9000, Loss 0.881
Iteration 10000, Loss 0.757
Iteration 11000, Loss 0.804
Iteration 12000, Loss 1.011
Iteration 13000, Loss 0.880
Iteration 14000, Loss 0.927
Iteration 15000, Loss 0.955
Iteration 16000, Loss 0.904
Iteration 17000, Loss 0.991
Iteration 18000, Loss 0.916
Iteration 19000, Loss 0.883
Iteration 20000, Loss 0.748
Iteration 21000, Loss 0.902
Iteration 22000, Loss 0.852
Iteration 23000, Loss 0.933
Iteration 24000, Loss 0.813
Iteration 25000, Loss 0.800
Iteration 26000, Loss 0.854
Iteration 27000, Loss 0.845
Iteration 28000, Loss 0.798
Iteration 29000, Loss 0.829
Iteration 30000, Loss 0.772
Iteration 31000, Loss 0.822
Iteration 32000, Loss 0.878
Iteration 33000, Loss 0.829
Iteration 34000, Loss 0.748
Iteration 35000, Loss 0.803
Iteration 36000, Loss 0.960
Iteration 37000, Loss 0.845
Iteration 38000, Loss 0.903
Iteration 39000, Loss 0.813
Iteration 40000, Loss 0.906
Iteration 41000, Loss 0.928
Iteration 42000, Loss 0.834
Iteration 43000, Loss 0.927
Iteration 44000, Loss 0.861
Iteration 45000, Loss 0.854
```

The paid version was then requested for the EECS Department:

 Hedges, Faith

To: Johnson, David Orville

  Reply  Reply all  Forward  ...

Thu 2/1/2024 8:01 PM

Hello Prof. Johnson,

My Senior Capstone group and I were wondering if it was possible to request for the EECS department to fund a Colab subscription for the remainder of the semester. We have run into a few bottlenecks due to the lack of computing power in the free version, and it would greatly accelerate our training if this were possible. We would use a joint account, so only one subscription would be required.


The basic subscription is \$9.99 a month, and for three months this would be \$29.97. It also includes access to more powerful GPUs, which would reduce training time.

There is another subscription that is \$49.99 a month, but I don't believe this would be necessary.






Thank you,

Faith


Prof. Johnson replied:


 Johnson, David Orville



To: Hedges, Faith

  Reply  Reply all  Forward  ...

Fri 2/2/2024 8:11 AM

 UKANS Employee_Reimburse...
68 KB


 W-9.pdf
129 KB

2 attachments (197 KB)  Save all to OneDrive - University of Kansas  Download all

Yes. The easiest way to do this is pay for it yourself and submit for reimbursement with the attached forms. Send the completed forms to me for approval and processing.

Let me know if you have any questions.

David



This is a potential way for completing the requirement; however, we noticed that the forms required personal information to be filled out, including Social Security Number, which seems potentially unsafe to send over email:

Form
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

W-9

Request for Taxpayer
Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC

☐ C Corporation

☐ S Corporation

☐ Partnership

☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶

☐ Other (see instructions) ▶

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from FATCA reporting code (if any)

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

or

Employer identification number

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and

2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and

3. I am a U.S. citizen or other U.S. person (defined below); and

4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions.

Sign

Signature of

This was mentioned to the EECS Accountant, and she responded with an alternative solution:

Cordes, Karla
To: Hedges, Faith

😊 ↩ Reply ↩ Reply all ➡ Forward 📎 ⋮

Wed 2/7/2024 4:37 PM

Hey Faith,

Can you send me some sort of Capstone Letter with this information along with an invoice or link of the subscription? I can pay it from our capstone funds.

Karla Cordes
EECS Accountant
University of Kansas
1246 West Campus Rd, Eaton Hall
Lawrence, KS 66045
(785) 864-8320

The invoice and capstone letter were sent, and all that is left is to stop by the EECS office and purchase the subscription once she is available to meet:

Choose the Colab plan that's right for you

Whether you're a student, a hobbyist, or a ML researcher, Colab has you covered

Colab is always free of charge to use, but as your computing needs grow there are paid options to meet them.

[Restrictions apply, learn more here](#)

Pay As You Go

\$9.99 FOR 100 COMPUTE UNITS

\$49.99 FOR 500 COMPUTE UNITS

You currently have 0 compute units.

Compute units expire after 90 days. Purchase more as you need them.



No subscription required.

Only pay for what you use.



Faster GPUs

Upgrade to more powerful GPUs.

Recommended

Colab Pro

\$9.99 PER MONTH



100 compute units per month

Compute units expire after 90 days. Purchase more as you need them.



Faster GPUs

This final step will likely be completed before the Team Meeting on Wednesday. It will certainly be available for our next sprint.

Hence we have successfully completed the requirement.