**Assignment 1**

**PART I: Confirm UNT Student Email Address**

1.1 What is the student’s UNT student email address? ***biniamabebe@my.unt.edu***  
1.2 Has the student received the Welcome-to-the-Class message via his/her email? ***Yes***  
1.3 If NO to Question 1.2, can the student access the student email ([...@my.unt.edu](mailto:...@my.unt.edu))? ***N/a***  
1.4 Is the student a UNT employee? ***No***  
1.5 If YES to Question 1.4, does he/she prefer using the UNT employee email for class communication? N/A  
1.6 If YES to Question 1.5, what is the student’s UNT employee email? N/A

**PART II: Select an Operating System**

## SUBMISSION REQUIREMENT #2.1:

* Steps I took to set up the GCP Account.  
  **Step 1:** Navigate to https://cloud.google.com/free?hl=en Creation Homepage.  
  **Step 2:** Click on **Get Started for Free  
  Step 3:** It will redirect to the Sign-In page, Sign In with your **Gmail ID**.  
  **Step 4:** I have used the code from the email (where it says **Your code**) in the Google Cloud console under the **Coupon code**.  
  **Step 5:** I agree to the terms, click **Accept and continue**. The credit is added to my account in a Cloud Billing account named for the course it applies to.

Screenshot documenting that I have successfully set up a GCP Account. A screenshot of a computer

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***Steps I took to set up the GCP Project.***

**Step 1:  I make sure I am signed in to the correct GCA account.**

**Step 2: Click the project selector button**

**Step 3: Click the Create Project button and follow the instructions**

Project name and Project ID.  
Project name: ADTA5550DPLRN  
Project number:585032912289  
Project ID: adta5550dplrn  
  
A screenshot of a computer

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## *Steps I took to set up the remote server*

## ****Step 1:****start an instance by Starting the VM

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## ****Step 2:****Click the 'SSH' button next to your running instance and wait for several minutes.

## ****Step 3:** Run the following code**

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## A screen shot of a computer Description automatically generated

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## SUBMISSION REQUIREMENT #2.2:

**Step 1:** Download the Google Cloud CLI installer.

**Step 2:** Launch the installer and follow the prompts. A screenshot of a computer

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**Step 3:**  Initialize the SDK by using code >

**Step 4:** Update the SDK

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**PART IV: Connect and Explore Remote VM Using SSH**

1:Open an SSH connection from the local computer to the remote VM.  
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2 . Examining the contents of the home directory using the fundamental Linux command lines. And created a new sub-folder named “JPTR\_NTBK” under the home directory

A screenshot of a computer program

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3. Navigate to the freshly created folder as the current directory.

A black screen with white text

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**PART V: Start and Connect to Jupiter Notebook in Remote VM**

4.1: In the remote virtual machine, launch the Jupyter Notebook server.

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4.2: **Connect** to the **Jupyter Notebook** server in the **remote** virtual machine (by connecting a Local Computer Port, i.e., 8000, to the Remote Server Port, i.e., 8888)

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4.3:**Use** Jupyter Notebook that is **currently running** in the **Remote Server** (in a browser on the local computer)

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Steps I took use Jupyter Notebook that runs in the remote virtual machine.

**Step 1:** SSH into VM

gcloud compute ssh biniamabebe@deep-learning-vm-example –project adta5550dplrn --zone us-south1-c

**Step 2:** Start the Jupyter Notebook

jupyter notebook --port=8888

**Step 3:**  Set Up SSH Tunneling

gcloud compute ssh biniamabebe@deep-learning-vm-example --project adta5550dplrn --zone us-south1-c -- -L 8000:localhost:8888

**Step 4:** Enter the URL to the browser   
 <http://localhost:8000>

**PART VI: History of AI and Big Data**

Let's start with how AI began. In the 1940s, scientists (e.g., McCulloch and Pitts) began contemplating what it would take for a machine to "think." The name AI was supposed to be coined in 1956 at an event called the Digital Conference. Call it the AI infancy: an electrical generation brimming with enthusiasm and wild ideas about what computers could do.

A screenshot of a computer

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However, what happened next is even more intriguing: AI did not evolve from there. However, instead, it encountered some significant hurdles — we call these the “AI winters.” The first one occurred around 1974–1980. It was like starting to build something big and realizing you do not have the necessary tools — that is essentially what happened. We did not have the computational power and could not store enough data. Another winter arrived from 1987-1993 as the companies understood that their AI systems were too expensive (despite getting better, but not enough for practical applications) to be used in real world.

Everything changed around 2012. Three important things lined up perfectly: data was massively available (you know, with the web and all), computers got very good at number-crunching (there were these inventions called GPUs), and better ways to teach machines how to learn stuff emerged. It's like having all the right ingredients, tools, and recipes finally combined.

The AI of today can now do what only a decade ago seemed like magic. It can outperform world champions in the most complex strategy game ever created, understand and speak human language, and even reproduce different types of art. This is by no means perfect—we are still grappling with serious concerns about fairness and ethicality in AI, its carbon footprint, and the traceability of decision-making(strategy).

This history shows a critical theme in AI—progress is driven not by one single breakthrough but rather by how different technological and scientific advances synergize. It is all a bit like trying to piece together a puzzle…you need each and every one of those pieces working in unison, or you do not get the full picture.

The AI story is not about computers getting smarter—it's about humans learning to understand and create intelligence themselves. We only have this extremely powerful system today that can be used in anything from medical research to creative works because of all the successes and failures we have experienced.

**References**

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