

REPORT

PRAGATI ENGINEERING COLLEGE

(Approved by AICTE, Permanently Affiliated to JNTUK, KAKINADA & Accredited by NBA)

1-378, A.D.B. Road, Surampalem, Near Peddapuram-533437



“Hands on Gemini AI”

Date: 09-09-2024.

Day: Monday.

Turing Club organised by the Dept. of CSE – AI&ML of Pragati Engineering College in association with Career Guidance Cell is organizing a seminar on "**Hands on Gemini AI**" as part of Industry 4.0.

REGISTRATION MADE BY STUDENTS:

S.NO	<u>NAME</u>	<u>ROLL NO</u>	<u>BRANCH</u>	<u>SECTION</u>
1	22A31A4202	ARIPAKAJYOTHIRMAISIRIVARSHINI	CSE(AIML)	A
2	22A31A4204	CHINTA SUSHMA	CSE(AIML)	A
3	22A31A4205	LOKASRINITHYA	CSE(AIML)	A
4	22A31A4207	MEDISETTICHANDRIKA	CSE(AIML)	A
5	22A31A4208	MUTHINTISIRI	CSE(AIML)	A
6	22A31A4209	NADIMPALLIKUSUMAAISHWARYA	CSE(AIML)	A
7	22A31A4210	NADIMPALLYSRIVAISHNAVI	CSE(AIML)	A
8	22A31A4211	NIDADAVOLU SATHVIKA	CSE(AIML)	A
9	22A31A4212	NIMMAKAYALALAKSHMIPRASANNADURGA ANJANI	CSE(AIML)	A
10	22A31A4217	SWATHISRIBOLLAMREDDY	CSE(AIML)	A
11	22A31A4221	UPPULURISOWMYASRI	CSE(AIML)	A
12	22A31A4222	VASAMSETTIINDHUPRIYA	CSE(AIML)	A
13	22A31A4223	YALLAMOUNISRI	CSE(AIML)	A
14	22A31A4224	YEPURI ANUSHA	CSE(AIML)	A
15	22A31A4225	ALAJANGI SHANMUKHAJAY	CSE(AIML)	A
16	22A31A4226	BANDARUBSVEERASAIGANESH	CSE(AIML)	A
17	22A31A4230	CHENNOJUSREEKANTH	CSE(AIML)	A
18	22A31A4231	CHETTIJAYAVEER	CSE(AIML)	A
19	22A31A4234	GOLAMARIVIVEKANANDAREDDY	CSE(AIML)	A
20	22A31A4235	GOPAVAJJULASUJITHKARTHIKEYA	CSE(AIML)	A
21	22A31A4239	KALDHARIRAHUL	CSE(AIML)	A
22	22A31A4240	KAMIDILIVINGSTANJOSEPH	CSE(AIML)	A
23	22A31A4242	KARRIUMASANKARHERAMBANAGASRINIVASA RAJU	CSE(AIML)	A
24	22A31A4245	MADABATHULASAIRAGHAVAADITYA	CSE(AIML)	A
25	22A31A4246	MARRENARENDARKARTHIKEYA	CSE(AIML)	A
26	22A31A42B5	MOTIPALLIRAMAKRISHNASUBRAHMANYAM	CSE(AIML)	A

S.NO	ROLLNO	NAME	B RANCH	SECTION
27	22A31A4247	MEDIDINAGENDRA	CSE(AIML)	A
28	22A31A4249	NAKKINACHANDRA MOULI	CSE(AIML)	A
29	22A31A4251	NEKKALAACHIBABU	CSE(AIML)	A
30	22A31A4258	THAMARAPALLI MAHESH	CSE(AIML)	A
31	22A31A4259	THURAKAKRANTHI KEERTHAN	CSE(AIML)	A
32	22A31A4264	ARANGISRIVALLESWARI	CSE(AIML)	A
33	22A31A4266	BADUGUAKSHAYA	CSE(AIML)	A
34	22A31A4267	BAYYAVARAPUSRIRAMYA	CSE(AIML)	A
35	22A31A4270	MOKSHAGNAGADUPUDI	CSE(AIML)	A
36	22A31A4273	GARIKANAPRASHANTISHIVASAIPRIYA	CSE(AIML)	A
37	22A31A4274	GUTTULACHINMAYEESAHITHYA	CSE(AIML)	A
38	22A31A4275	KAMIREDDILAKSHMIKEERTHISRI	CSE(AIML)	A
39	22A31A4278	MAMIDI RESHMA	CSE(AIML)	A
40	22A31A4282	PABBINEEDISATYANAGAVAISHNAVIDEVI	CSE(AIML)	A
41	22A31A4285	PUSARLA MANASWINI	CSE(AIML)	A
42	22A31A4286	SAMIKSHAYADAV	CSE(AIML)	A
43	22A31A4287	SATYAVARAPULAKSHMIDHANYASRI	CSE(AIML)	A
44	22A31A4288	TANISHAPERLA	CSE(AIML)	A
45	22A31A4289	VADREVVU LAKSHMIKAMESWARI	CSE(AIML)	A
46	22A31A4291	VANAPARTHIRENUSRIAMRUTHA	CSE(AIML)	A
47	22A31A4297	BHEEMANA VENKATALAKSHMIS Aidinesh	CSE(AIML)	A
48	22A31A4298	DODDIPATLADEVISRIVIKAS	CSE(AIML)	A
49	22A31A42A1	KESANA VENKATA RAMESH	CSE(AIML)	A
50	22A31A42A3	K V MANAS	CSE(AIML)	
51	22A31A42A4	KOKKARLAGADDABHARATHKUMARVARMA	CSE(AIML)	A
	22A31A42A6	KOPPADA PRUDHVIVINAYAK		A
52	22A31A42B0	MANCHALA DVVS SWAROOP	CSE(AIML)	A
53	22A31A42B1	MANDAPALLIKIRANTEJA	CSE(AIML)	A

S.NO	ROLLNO	NAME	B RANCH	SECTION
56	22A31A42B6	MUDUNURIKARTHIKSURYASAIVARMA	CSE(AIML)	A
57	22A31A42B8	NIDIGATLAROOPCHAND	CSE(AIML)	A
58	22A31A42C2	MANOJSWAMYSARELLA	CSE(AIML)	A
59	22A31A42C3	SHAIKMOHAMMEDIMRAN	CSE(AIML)	A
60	22A31A42C4	SHAIKTOWSIQ	CSE(AIML)	A
61	22A31A42C6	VADAPALLIHEMANTH SAI	CSE(AIML)	A
62	23A35A4201	BOOREDDI CHETHANA	CSE(AIML)	A
63	23A35A4204	VASSEGANGARATNAMANASA	CSE(AIML)	A
64	23A35A4206	ANUSURI KISHORE	CSE(AIML)	A
65	23A35A4208	JAMMANAVEERA VENKATASATYANARAYANA	CSE(AIML)	A
66	23A35A4210	PULAKALA VAMSI	CSE(AIML)	A
67	23A35A4213	CHOKKASIVA CHARAN	CSE(AIML)	A
68	23A35A4201	BOOREDDI CHETHANA	CSE(AIML)	A

ATTENDED STUDENT LIST:



PRAGATI ENGINEERING COLLEGE
 (Autonomous)
 B.Tech
 Computer Science and Engineering
 (Artificial Intelligence & Machine Learning)

EVENT NAME: Hands on Gemini AI
 DATE: 10-9-2024
 SPEAKER NAMES: A. Neha & ch. Sai priya.
 The list of students attended for this event.

S.No	Roll No.	Name of the Student	Year	Signature
1	22A31A4270	G. Mohanagna	III	G. Mohanagna
2	22A31A4202	D. Sri Ch. Srujan	II	D. Srujan
3	22A31A4268	Ch. Sai Pranusha	III	Ch. Sai Pranusha
4	22A31A42E1	MD. Rabiya Gabassum	III	MD. Rabiya
5	22A31A4277	M. Neha	II	M. Neha
6	22A31A42F0	Y.D.S.K. Nandini	II	Y. Nandini
7	22A31A42D6	K.G.B. Saruna	II	K.G.B. Saruna
8	22A31A42E5	P.N.V.S. Sailaja	III	P. Sailaja
9	22A31A4202	A.J.S. Jashini	IV	A.J.S. Jashini
10	22A31A42E8	R. Naga Mohan?	III	R. Naga Mohan?
11	23A31A4220	V. Ramaditya	III	V. Ramaditya
12	22A31A42E7	P.S. Subha Kanthi	III	P.S. Kanthi
13	22A31A42D6	J. Venne La	III	J. Venne La

B. Suthi Sri
 Student coordinator

A. Ganesha
 Faculty Coordinator

A. Radha Krishna
 HoD-CSE(AI&ML)





PRAGATI ENGINEERING COLLEGE
(Autonomous)
B.Tech
Computer Science and Engineering
(Artificial Intelligence & Machine Learning)

The list of students attended for this event.

S.No	Roll No.	Name of the Student	Year	Signature
14.	22A31A4196	B. Kasi Swiya	III	B. Kasi Swiya
15	22A31A4252	G. Ajay Varma	III	G. Ajay
16.	22A11A4199	D. Abhishek	III	D. Abhi
17	22A31A4215	M. Varunkrishna	III	M. Varunkrishna
18	22A31A4221	P. Ashwathi	III	P. Ashwathi
19.	22A31A4214	A. Vishwanathan	III	A. Vishwanathan
20	22A31A4228	D. Davi Sri Viji	III	D. Davi Sri Viji
21.	22A31A4215	P. Sai Deepthi	III	P. Sai Deepthi
22.	22A31A4206	A. Kishore	III	A. Kishore
23.	22A31A4203	T. Hema	III	T. Hema
24.	22A31A4211	A. Meghanadh	III	A. Meghanadh
25	22A31A4201	CH Jayaveer	III	CH Jayaveer
26.	22A31A4205	V. Lakshmi devi	III	V. Lakshmi devi
27.	22A31A4203	P. Lalitha Sakthya	III	P. Lalitha Sakthya

B. Sweethi Si
Student coordinator

A. Raju
Faculty Coordinator



A. Radha Krishna
HoD-CSE(AI&ML)





PRAGATI ENGINEERING COLLEGE
(Autonomous)
B.Tech
Computer Science and Engineering
(Artificial Intelligence & Machine Learning)

EVENT NAME: Haris on Gemini AI

DATE: 10-9-2024

SPEAKER NAMES: A. Neha S ch. Saipriya.

The list of students attended for this event.

S.No	Roll No.	Name of the Student	Year	Signature
15	22A31A4263	A. Varavi	III	A. Varavi
16	22A31A4264	A. Sivalakshmi		A. Sivalakshmi
17	22A31A4265	A. Lalitha	III	A. Lalitha
18	22A31A4204	Chinta. sudma	III	Chinta. sudma
19	22A31A4285	P. manasini	III	P. Manasini
20	22A31A4283	P. Suresha	III	P. Suresha
21	22A31A4278	M. Roshma	III	M. Roshma
22	22A31A4208	M. Siri	III	M. Siri
23	22A31A4217	B. Sreethi Sri	III	B. Sreethi Sri
24	22A31A4223	Y. Mouni Sri	III	Y. Mouni Sri
25	22A31A4225	K. L. Kirthika	III	K. L. Kirthika
26	22A31A4208	G. Prashanti	III	G. Prashanti
27	22A31A4271	G. Lakshmi Sahithi	III	G. Lakshmi Sahithi

B. Sreethi Sri
Student coordinator

A. Ganesha
Faculty Coordinator

A. Radha Krishna
HoD-CSE(AI&ML)





PRAGATI ENGINEERING COLLEGE
(Autonomous)
B.Tech
Computer Science and Engineering
(Artificial Intelligence & Machine Learning)

The list of students attended for this event.

S.No	Roll No.	Name of the Student	Year	Signature
1	22A31A448	Apalkavi	III	Apalkavi
2	22A31A4267	B. Srikanya	III	B. Srikanya
3	22A31A4207	M. Chandrika	III	M. Chandrika
4	22A31A4218	A. V. S. Srinivasa	III	A. V. S. Srinivasa
5	22A31A4405	N. Sai Vaidhavan	III	N. Sai Vaidhavan
6	22A31A4291	V. Renu Sri Aravindha	III	V. Renu Sri Aravindha
7	22A31A4224	Y. Anusha	III	Y. Anusha
8	22A31A4290	V. Abhinav	III	V. Abhinav
9	22A31A4275	Y. Megha	III	Y. Megha
10	22A31A4281	P. Ashwathi	III	P. Ashwathi
11	22A31A4244	D. Abhishek	III	D. Abhishek
12	22A31A4226	L. Vanshika	III	L. Vanshika
13	22A31A4296	B. Kasi Suresh	III	B. Kasi Suresh
14	22A31A4224	N. Vigneshwara	III	N. Vigneshwara

B. Suresh S.
Student coordinator

A. Ramana.
Faculty Coordinator

A. Koolha Krishna
HoD-CSE(AI&ML)



FEED BACK

S.No	Roll No	Name	ABOUT SPEAKER	ABOUT CONTENT	ANY SUGGESTION
1	22A31A4270	MOKSHAGNA GADUPUDI	5	5	No
2	22A31A42D2	DARBHA SRI SAI SRUTHI	5	5	No
3	22A31A4268	CHODAPANEEDI SAI PRANUSHA	5	5	No
4	22A31A42E1	MOHAMMAD RABIYA TABASSUM	4	4	Good
5	22A31A4277	MALLENA NEHA	5	5	No
6	22A31A42F0	YELUGUBANTI DEVI SRI KANAKA NANDINI	5	5	No ... Its good
7	22A31A42D9	KOSIREDDI DEEPIKA	4	4	No
8			4	4	Nothing
9	22A31A42E5	PATNEEDI NAGA VENKATA SRI SAILAJA	5	5	No
10	22A31A42E7	PUSAPATI SAI SUBHA KANTHI	5	5	No
11	22A31A42D6	JONNADA VENNELA	5	5	No
12	22A31A4202	ARIPAKA JYOTHIRMAI SIRI VARSHINI	4	4	No
13	22A31A4220	THEDLA BHANU SREE	4	4	No
14	22A31A4296	BENDALAM KALISURYA	4	4	No
15	22A31A4299	DUNNA ABHISHEK	4	4	None
16	22A31A42C1	PENUMALA ASHWANTH	5	5	Nothing
17	22A31A42H3	MACHARLA VARUN KRISHNA	3	3	Good
18	22A31A42H4	NEDUNURI VISHNU VARDHAN	4	4	Good
19	22A31A42H5	PUVVADA NAGA KOTA SATYA SAI DURGESH	5	5	Nothing
20	22A31A4298	DODDIPATLA DEVI SRI VIKAS	5	5	Nothing
21	22A31A4231	CHETTI JAYAVEER	5	5	No
22	23A35A4203	THALATI HEMA	5	5	No
23	23A35A4205	VITTANALA LALITHA DEVI	5	5	No
24	23A35A4206	ANUSURI KISHORE	4	4	None
25	22A31A42E3	PALACHARLA LALITHA SAHITYA	5	5	No
26	22A31A42F1	ALLAKA M E B SUBRAHMANYESWARA RAO	5	5	No

FEED BACK ANALYSIS

How satisfied were you with the session content:

Total number of Students: 26

Number Of Students Rating 5: 16

Number Of Students Rating 4: 9

Number Of Students Rating 3: 1

Number Of Students Rating 2: 0

Number Of Students Rating 1: 0

Overall rating: **Very Good**

Content Delivered in the Event :

Gemini AI, developed by Google Deep Mind, is one of Google's most advanced AI models, designed to handle a variety of tasks across multiple modalities, including text, code, audio, and images. The Gemini family is optimized into several tiers such as **Gemini Ultra, Pro, and Nano**, each catering to different needs, from complex tasks to efficient on-device processing.

Some of the standout features of Gemini include its **multimodal capabilities**, allowing it to seamlessly combine inputs like text and images to generate creative responses or perform sophisticated reasoning. It excels in **text understanding, image generation, and even coding**. For instance, it can analyze large documents or data and generate summaries, visualizations, and even Python code(

Gemini integrates closely with Google products like Gmail, Docs, and Sheets, allowing users to automate tasks such as drafting emails or analyzing spreadsheets. There are also **premium options**, such as Gemini Advanced, which offers a more powerful version with expanded functionality, including enhanced reasoning capabilities and faster processing, often bundled with services like Google One for storage(

In comparison to other AI models like ChatGPT, Gemini tends to outperform in areas like **web browsing and image search** due to Google's search capabilities, though it may still be catching up in **natural conversational flow and data analysis**, where ChatGPT has specific advantages

The examples included in your dataset should match your expected production traffic. If your dataset contains specific formatting, keywords, instructions, or information, the production data should be formatted in the same way and contain the same instructions.

For example, if the examples in your dataset include a "question:" and a "context:", production traffic should also be formatted to include a "question:" and a "context:" in the same order as it appears in the dataset examples. If you exclude the context, the model can't recognize the pattern, even if the exact question was in an example in the dataset.

As another example, here's Python training data for an application that generates the next number in a sequence:

```
training_data = [  
    {"text_input": "1", "output": "2"},  
    {"text_input": "3", "output": "4"},  
    {"text_input": "-3", "output": "-2"},  
    {"text_input": "twenty two", "output": "twenty three"},  
    {"text_input": "two hundred", "output": "two hundred one"},  
    {"text_input": "ninety nine", "output": "one hundred"},  
    {"text_input": "8", "output": "9"},  
    {"text_input": "-98", "output": "-97"},  
    {"text_input": "1,000", "output": "1,001"},  
    {"text_input": "10,100,000", "output": "10,100,001"},  
    {"text_input": "thirteen", "output": "fourteen"},  
    {"text_input": "eighty", "output": "eighty one"},  
    {"text_input": "one", "output": "two"},  
    {"text_input": "three", "output": "four"},  
    {"text_input": "seven", "output": "eight"},
```

]

Adding a prompt or preamble to each example in your dataset can also help improve the performance of the tuned model. Note, if a prompt or preamble is included in your dataset, it should also be included in the prompt to the tuned model at inference time.

Limitations

Note: Fine-tuning datasets for Gemini 1.5 Flash have the following limitations:

- The maximum input size per example is 40,000 characters.
- The maximum output size per example is 5,000 characters.

Training data size

You can fine-tune a model with as little as 20 examples. Additional data generally improves the quality of the responses. You should target between 100 and 500 examples, depending on your application. The following table shows recommended dataset sizes for fine-tuning a text model for various common tasks:

Task	No. of examples in dataset
Classification	100+
Summarization	100-500+
Document search	100+

Upload your tuning dataset

Data is either passed inline using the API or through files uploaded in Google AI Studio.

To use the client library, provide the data file in the `createTunedModel` call. File size limit is 4 MB. See the [fine-tuning quickstart with Python](#) to get started.

To call the REST API using `cURL`, provide training examples in JSON format to the `training_data` argument. See the [tuning quickstart with cURL](#) to get started.

Advanced tuning settings

When creating a tuning job, you can specify the following advanced settings:

- **Epochs:** A full training pass over the entire training set such that each example has been processed once.
- **Batch size:** The set of examples used in one training [iteration](#). The batch size determines the number of examples in a batch.
- **Learning rate:** A floating-point number that tells the algorithm how strongly to adjust the model parameters on each iteration. For example, a learning rate of 0.3 would adjust weights and biases three times more powerfully than a learning rate of 0.1. High and low learning rates have their own unique trade-offs and should be adjusted based on your use case.
- **Learning rate multiplier:** The rate multiplier modifies the model's original learning rate. A value of 1 uses the original learning rate of the model. Values greater than 1 increase the learning rate and values between 1 and 0 lower the learning rate.

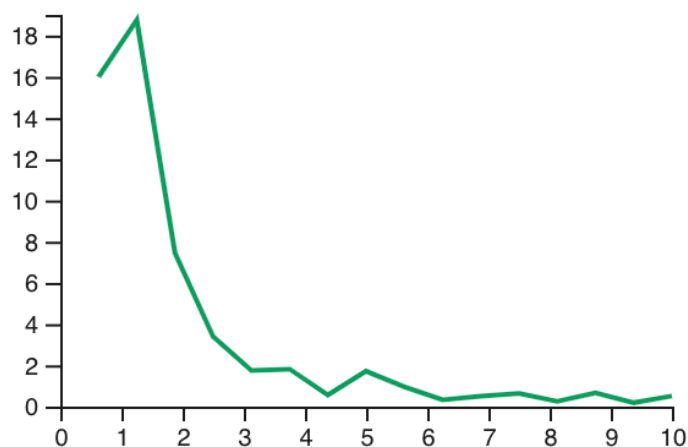
Recommended configurations

The following table shows the recommended configurations for fine-tuning a foundation model:

Hyperparameter	Default value	Recommended adjustments
Epoch	5	If the loss starts to plateau before 5 epochs, use a smaller value. If the loss is converging and doesn't seem to plateau, use a higher value.
Batch size	4	
Learning rate	0.001	Use a smaller value for smaller datasets.

The loss curve shows how much the model's prediction deviates from the ideal predictions in the training examples after each epoch. Ideally you want to stop training at the lowest point in the curve right before it plateaus. For example, the graph below shows the loss curve plateauing at about epoch 4-6 which means you can set the Epoch parameter to 4 and still get the same performance.

Loss / Epochs ⓘ



Check the tuning job status

You can check the status of your tuning job in Google AI Studio under the **My Library** tab or using the metadata property of the tuned model in the Gemini API.

Troubleshoot errors

This section includes tips on how to resolve errors you may encounter while creating your tuned model.

Authentication

Tuning using the API and client library requires user authentication. An API key alone is not sufficient. If you see a 'Permission Denied: 403 Request had insufficient authentication scopes' error, you need to set up user authentication.



Pragati Engineering College

(Approved by AICTE, permanently affiliated to JNTUK, Kakinada & Accredited by NBA & NAAC with "A" Grade)

INDUSTRY 4.0 CLUB TURING CLUB

Of CSE(AI&ML) Department in Association With Career Guidance
Organizes

HANDS ON GEMINI AI



Seminar On

MONDAY

9

SEPTEMBER

TIMING

2:00PM

TO 3:30 PM

Venue:CS8

Seminar Speakers:



NEHA SAI SRITHA AKELLA
21A31A4219



CHINTAGUNTA ESWARI NAGA SAI PRIYA
21A31A4205

Student Cordinators:

Swathi sri B(22A31A4217))
Achibabu N(22A31A4251))

Faculty Cordinator

Mrs.L.Yamuna

Head Of The Department

Dr.A.Radha Krishna



PRAGATI ENGINEERING COLLEGE

(Autonomous)

1-378 ,ADB Road,SURAMPALEM - 533437

PEC / Admin / Circular / 2024 / Turing CLUB

Date: 6-09-2024.

All the staff, Pragati Turing club coordinators, Second and Third year Students are informed that a seminar on “**Hands on Gemini AI**” is being organized by Turing club in association with career Guidance cell. The details are given below.

Date: 09-9-2024

Time: 2:00 PM to 3:30 PM

Venue: CS-8

Faculty Co-coordinator: Mrs.L.Yamuna

Student Co-Ordinator: SWATHI SRI B (III -year CSE (AI&ML)-22A31A4217)

ACHI BABU (III-year CSE (AI&ML)-22A31A4251)

Speaker: NEHA SAI SRITHA AKELLA (IV-year CSE (AI&ML)-21A31A4219)

CH. ESWARI NAGA SAI PRIYA (IV-year CSE (AI&ML)-21A31A4205)

Faculty coordinator

HoD-CSE(AI&ML)

Copy to:

- 1) Chairman /All Directors / Vice President for kind information.
- 2) Vice Principal/Dean T&P for information.
- 3) All HODs are requested to circulate among your staff members.
- 4) Convener-Career Guidance cell
- 5) Office File.