

Hands-on Generative AI Workshop

(20 Jan 2024 - 12.00 Noon to 03.00 PM)

A one days' workshop on "Hands-on Generative AI Workshop", was conducted at Faculty of Engineering and Technology (FET), Gurukula Kangri (Deemed to be University) Campus on online mode, in collaboration with "NxtWave Pvt Ltd, Manikonda Jagir, Telangana", on 20 Jan 2024 during 12.00 Noon to 03.00 PM to encourage knowledge sharing & practical hands-on on Generative AI among students.

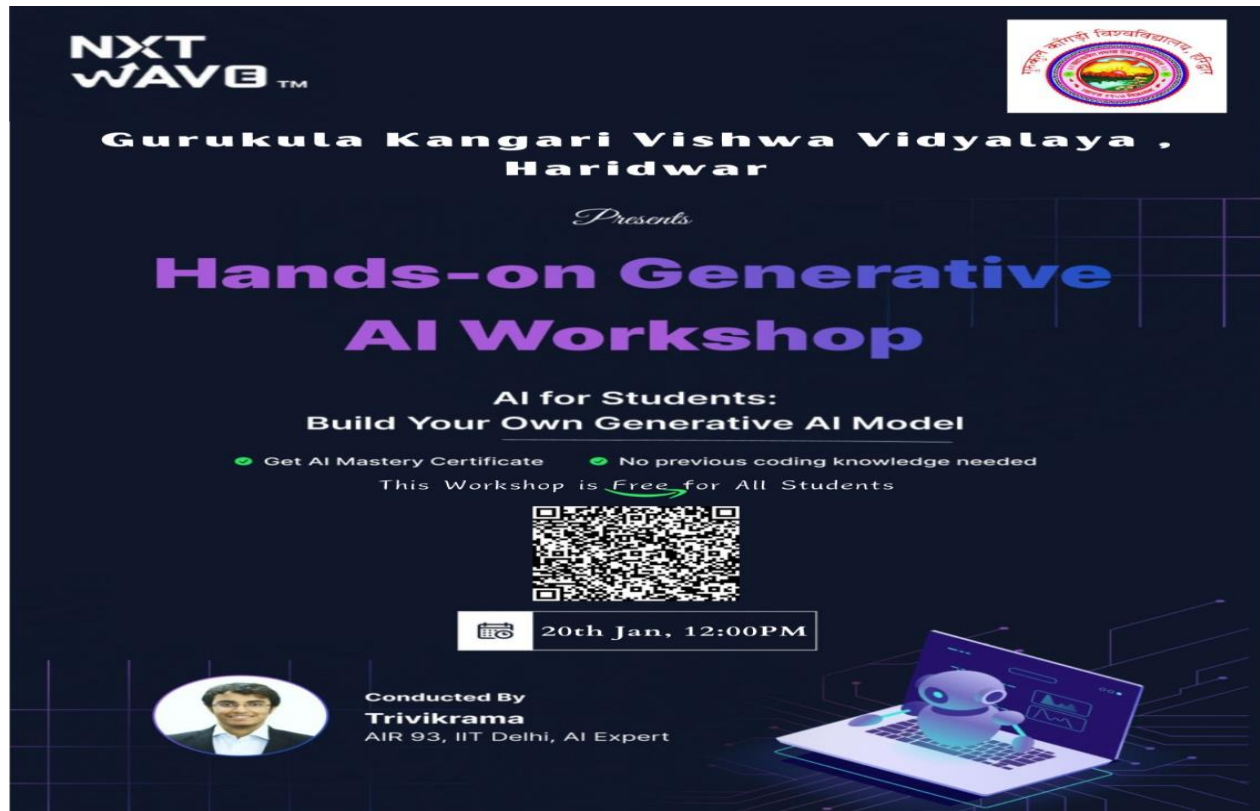
The workshop started with welcome of Mr.Trivikarma Kothinti, AI Expert from NxtWave Pvt Ltd, by Prof. Mayank Aggarwal, Head of department of CSE-FET GKV Haridwar. Along with warm welcome of Speaker of the session, Prof. Mayank Aggarwal enlighten the session with brief introduction of Generative AI, future scope & career growth with Generative AI as well. Apart from registered participants, all the faculties from CSE department have attended and enjoyed this workshop, whereas Mr. Deepak Painuli, Assistant Professor, CSE Dept, acted as coordinator of this workshop.

Workshop observed to be divided into two part, where former part includes expert talk on theoretical foundation of Artificial Intelligence(AI) and its broad categories like AGI & ANI, machine learning (ML) & deep learning(DL), along with introduction of Generative AI & its applications and Prompt Engineering, whereas later part includes Hands-on on Generative AI, where AI Expert showcased practical development of Generative AI model using a predefined environment of AI development using Google Colab Python Notebook file. During hands-on session, Expert did a project named "Dreambooth", where all the necessary steps to download & load (Data & pretrained Model), to initialize development environment, to fine tune and deploy developed fine tuned model in real time have been shown practically, which seems to be very informative and interesting to students and other audience. The speaker finished the session by advising the participants to acquire industry-relevant skills like Generative AI, ML,DL etc and encouraged the participants to build as many projects students can do, on their favourite skill.

More than 291 students registered for the event out of which 165 students were from Computer Science & Engineering, 61 from Electrical Engineering, 42 from Electronics and Communication Engineering and 23 students from Mechanical Engineering Branch.

The Workshop proved to be an invaluable learning experience for all attendees, leaving them with a deeper understanding of the potential and significance of Generative AI in today's technological landscape. It served as a platform for knowledge sharing and exploration, fostering a greater appreciation for the evolving field of AI.

Glimpse of Workshop:



NXT WAVE™

Gurukula Kangari Vishwa Vidyalyaya , Haridwar

Presents

Hands-on Generative AI Workshop

**AI for Students:
Build Your Own Generative AI Model**

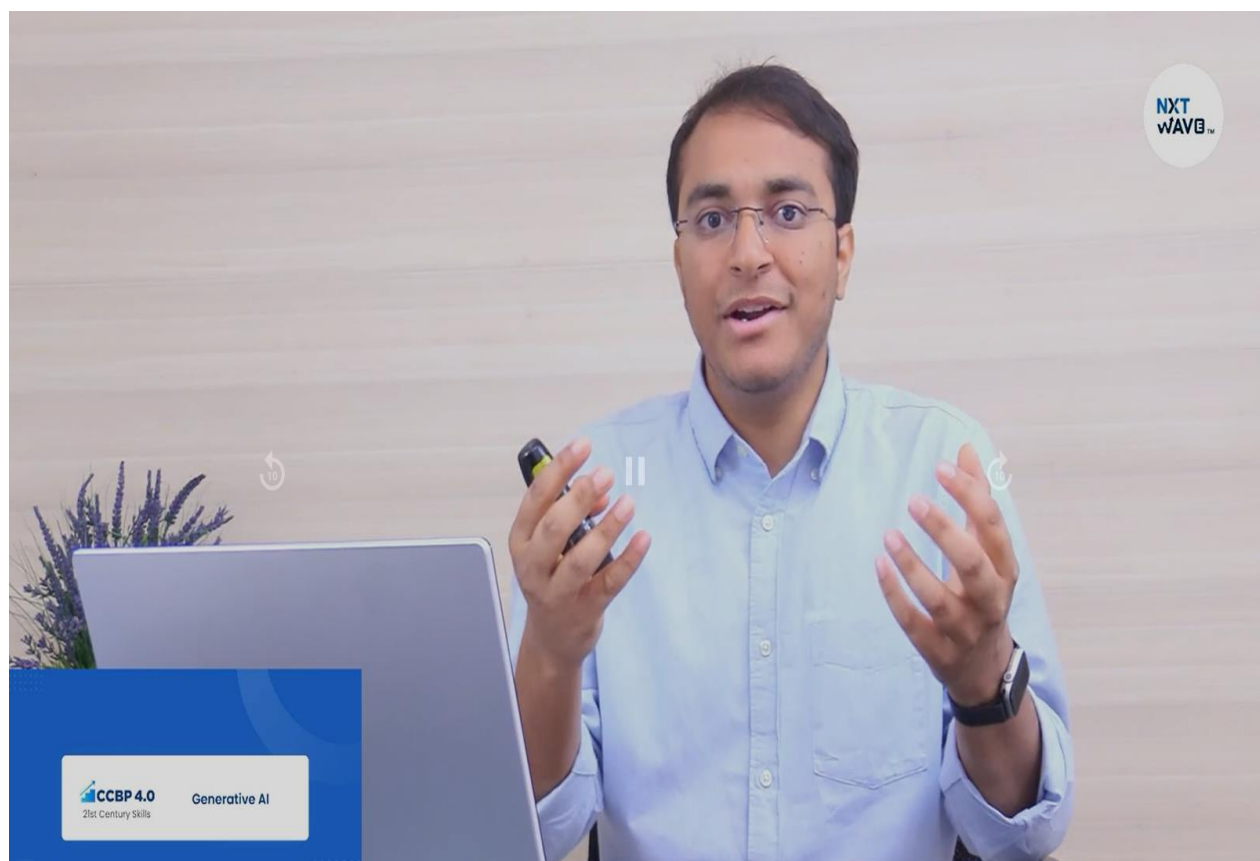

- Get AI Mastery Certificate
- No previous coding knowledge needed

This Workshop is Free for All Students



20th Jan, 12:00PM

Conducted By
Trivikrama
AIR 93, IIT Delhi, AI Expert



NXT WAVE™

CCBP 4.0
21st Century Skills

Generative AI

Review

- ✓ ANI vs AGI
- ✓ Creation of Intelligent Machines - AI, ML, DL
- ✓ AI Applications that we are using today!
- ✓ Analytical AI vs Generative AI
- ✓ Prompt Engineering
- ✓ Current Limitations of Generative AI
- ✓ Building your own Generative AI Model
- ✓ Endless Opportunities in AI



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the Power of Friendship x DreamStudio x Prompt Engineering Mini-Project x 0:00:44

docs.google.com/document/d/1QgD0OxMZjsz58uD2uPoEfcjFgiTSIbeuNe8cROLWY/edit#heading=h.y5ifrc7ud9uc

Prompt Engineering Mini-Project - NxtWave [B323daoier23] ☆ ML

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Summary +

Outline

– Essay on Friendship

Hotel Room with Stunning Views

Prompt 1: write me a very short essay on friendship

Output 1:

Title: The Essence of Friendship

Friendship is a treasure, a bond that transcends boundaries and brings immeasurable joy to our lives. It is the warmth of a shared smile, the comfort of an understanding glance, and the solace of a listening ear. In friendship, we find unwavering support, unwritten agreements, and unspoken understanding. It is a sanctuary where we can be ourselves, knowing that acceptance and love will always prevail. Friendship is the essence of connection, reminding us that we are never alone on this beautiful journey called life.

Prompt 2: write me a very short paragraph not exceeding 200 words on friendship. this paragraph should be little funny

Output 2:

Friendship is like having a personal stand-up comedian on call, ready to crack jokes and brighten your day. It's having someone who knows all your embarrassing stories and still manages to keep a straight face. You can count on a friend to make even the most mundane activities, like grocery shopping, feel like a comedy sketch. They'll turn a simple trip down the aisle into a hilarious debate over the merits of crunchy versus marshmallow-filled breakfast options. With a friend by your side, even the most awkward moments become laugh-out-loud funny, like when you both showed up to a party wearing the same ridiculous outfit, unintentionally rocking the "twinning" look. Friendship is that constant reminder that life is better when you can share a good laugh with someone who appreciates your unique brand of humor, no matter how silly or downright ridiculous it may be.

Prompt 3: write me a very short paragraph not exceeding 200 words on friendship in the style of mark twain

Output 3:

colab.research.google.com/drive/1PhRoK0AgXJpgBLsUDTs2Q-W6XA34sE5i7authuser=1#scrollTo=Qyvcqeil65Tj

Copy of Build your own GenAI Model.ipynb

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- Mounting Your Google Drive
- Dependencies Installation
- Base Model Download
- Dreambooth Fine Tuning Setup
- Training
- Test Your Model
- Upload Trained Model to Hugging Face

Dependencies

```
#@markdown #Dependencies

from IPython.utils import capture
import time
import os

print('\u001b[1;32mInstalling dependencies...\u001b[0m')
with capture.capture_output() as cap:
    %cd /content/
    !pip install -qq --no-deps accelerate==0.12.0
    !wget -q -i https://raw.githubusercontent.com/Tr
    !dpkg -i *.deb
    !tar -C / --zstd -xf gcolabdeps.tar.zst
    !rm *.deb | rm *.zst | rm *.txt
    !git clone -q --depth 1 --branch main https://gi
    !pip install gradio==3.16.2 --no-deps -qq
    %env LD_PRELOAD=libtcmalloc.so
    os.environ['TF_CPP_MIN_LOG_LEVEL'] = '3'
    os.environ['PYTHONWARNINGS'] = 'ignore'

print('\u001b[1;32mDone, proceed\u001b[0m')

... Installing dependencies...
```

<cell line: 8> > system() > _system_comput() > _run_command() > _monitor_process() > _poll_process()

colab.research.google.com/drive/1UCe0grR_XGrGvZyCQh8ubXpR2KdHg#scrollTo=O3KHGKqyelp9

Copy of Build your own GenAI Model [NxtWave Hands-On].ipynb

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Base Model Download

```
1 import os
2 import time
3 from IPython.utils import capture
4 from IPython.display import clear_out
5 import wget
6 from subprocess import check_output
7 import urllib.request
8 import base64
9
10 #@markdown - Skip this cell if you are
11
12 #@markdown ---
13
14 Model_Version = "1.5" #@param [ "1.5" ]
15
16 #@markdown - Choose which version to
17
18 with capture.capture_output() as cap:
19     %cd /content/
20
21 modelnm="model.ckpt"
22
23 if os.path.exists('/content/gdrive/My
24     with open('/content/gdrive/MyDrive/
25         token = f.read()
26     auth=f'https://USER:{token}@'
27 also:
```

Model_Version: 1.5

• Skip this cell if you are loading a previous session that contains a trained model.

• Choose which version to finetune.

Release notes

Please follow our [blog](#) to see more information about new features, tips and tricks, and featured notebooks such as [Analyzing a Bank Failure with Colab](#).

2024-01-08

- Avoid nested scrollbars for large outputs by using `google.colab.output.no_vertical_scroll()` [Example notebook](#)
- Fix [bug](#) where downloading models from Hugging Face could freeze
- Python package upgrades
 - huggingface-hub 0.19.4 -> 0.20.2
 - bigframes 0.17.0 -> 0.18.0

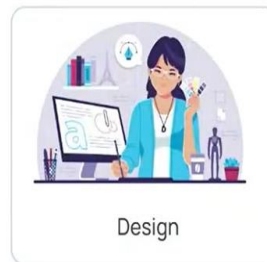
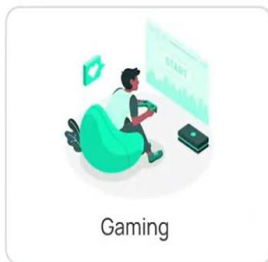
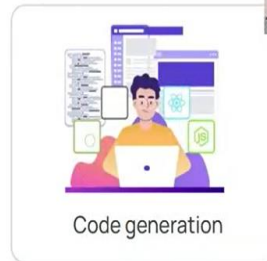
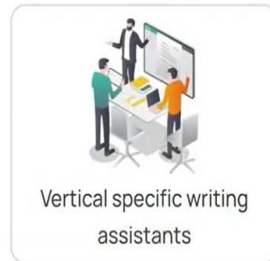
2023-12-18

- Expanded access to AI coding has arrived in Colab across 175 locales for all tiers of Colab users
- Improvements to display of ML-based inline completions (for eligible Pro/Pro+ users)
- Started a series of [notebooks](#) highlighting Gemini API capabilities
- Enable `%Ctrl+L` to select the full line in an editor
- Fixed [bug](#) where we weren't correctly formatting output from multiple execution results
- Python package upgrades
 - CUDA 11.8 to CUDA 12.2
 - tensorflow 2.14.0 -> 2.15.0
 - tensorboard 2.14.0 -> 2.15.0

30s completed at 11:54

11:54 AM 1/20/2024

Applications across Domains



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Prompt Engineering



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List of Participants:

S.NO	Student Name	Branch
1	AMRENDRA YADAV	CSE
2	AYUSH KAUSHAL	CSE
3	Aayush Rawat	CSE
4	Abhijeet Raj	CSE
5	Abhinandan	CSE
6	Abhinav Pandey	CSE
7	Abhinav Singh	CSE
8	Adarsh Dixit	CSE
9	Aditya Srivastav	CSE
10	Akash Kumar	CSE
11	Akash Patel	CSE
12	Akash verma	CSE
13	Akhilesh Yadav	CSE
14	Akshat Sharma	CSE
15	Alok kumar	CSE
16	Aman Kumar	CSE
17	Aman Raj	CSE
18	Aman Verma	CSE
19	Amarpreet Kumar	CSE
20	Amit Kumar	CSE
21	Anil Pankaj	CSE
22	Ankit Raj	CSE
23	Ankit Suthar	CSE
24	Ankur Singh	CSE
25	Ankush	CSE
26	Ankush Rawat	CSE
27	Anshu kumar	CSE
28	Anshuman Rath	CSE
29	Anuvrat chauhan	CSE
30	Ariyan Kumar Mahakur	CSE
31	Arman Mohamand	CSE
32	Ashish Singh	CSE
33	Ashish kumar	CSE
34	Ashutosh Kumar	CSE
35	Ashutosh Nandan	CSE
36	Ayush Kumar Sain	CSE
37	Baiju kumar	CSE
38	Bharat Mehra	CSE
39	Bhukya Krishna Chaitanya	CSE
40	Bikram Ghoshal	CSE
41	Chinmay saraswat	CSE

S.NO	Student Name	Branch
147	Someshwar deo tripathi	CSE
148	Souhard Singh	CSE
149	Sudhish Kumar	CSE
150	Sumit Bansal	CSE
151	Suraj Saroj	CSE
152	UTKARSH GUPTA	CSE
153	Umang Kumar Singh	CSE
154	Utkarsh Dubey	CSE
155	Vaibhav Mishra	CSE
156	Vansh Kushwaha	CSE
157	Vishal Kumar	CSE
158	Vishal singh	CSE
159	Vishwvijay Pradhan	CSE
160	Yash Gupta	CSE
161	Yash Sehgal	CSE
162	Yash Sharma	CSE
163	Yuvraj Kumar Gond	CSE
164	akshay jangra	CSE
165	vivek pradhan	CSE
166	ABHINAV KUMAR	EE
167	AKASH SINGH SISODIA	EE
168	Abhimanyu Kumar	EE
169	Abhinav Rauth	EE
170	Abhishek kumar	EE
171	Aditya Khandelwal	EE
172	Aditya Singh Yaduvanshi	EE
173	Akash Maurya	EE
174	Alan Tirkey	EE
175	Amit kumar	EE
176	Angad pandey	EE
177	Ankit kumar	EE
178	Annu Ahirwar	EE
179	Arpit soni	EE
180	Aryan Solanki	EE
181	Ashu Sarwan	EE
182	Ayush Gautam	EE
183	BIKASH Kumar pandit	EE
184	Dayaram meena	EE
185	Deepak rawal	EE
186	Devansh saini	EE
187	Devendra kumar sain	EE

42	Chitransh Badgainya	CSE
43	Deepak Painuli	CSE
44	Dhiraj kumar	CSE
45	Dilkhush Mali	CSE
46	Galax Kshetrimayum	CSE
47	Grandhi Harshith	CSE
48	Gyan Singh	CSE
49	Hariom	CSE
50	Harsh	CSE
51	Harsh Katiyar	CSE
52	Harsh Modi	CSE
53	Harsh chourasia	CSE
54	Harsh joshi	CSE
55	Harshit Kumar	CSE
56	Harshit Raj Chandra	CSE
57	Himanshu Dixit	CSE
58	Hitesh Kumr	CSE
59	Ishaan Sugandh	CSE
60	Kanishk Bhardwaj	CSE
61	Kapil dev jadon	CSE
62	Ketha Mohan Raj	CSE
63	Kishan Kumar Sharma	CSE
64	Kokkiligadda Lokesh Harsha	CSE
65	Kotla Jagadeesh	CSE
66	Kulveer	CSE
67	Kushagra Singh	CSE
68	LAKSHAY	CSE
69	LALIT GOYAL	CSE
70	Lavish choudhary	CSE
71	Luxmi shankar	CSE
72	MANOJ KUMAR	CSE
73	Madhur Gahlot	CSE
74	Manish Kumar	CSE
75	Manish Sharma	CSE
76	Manjeet Singh	CSE
77	Mayank Pokhriyal	CSE
78	Mayank Pratap Singh	CSE
79	Mradul Mishra	CSE
80	NAJISH AKHTAR	CSE
81	Navneet bhushan mishra	CSE
82	Nimish Kumar	CSE
83	Nitesh Kumar Meena	CSE
84	Nitish Kumar	CSE
85	Nitish Varshney	CSE

188	Gaurav Verma	EE
189	Harsh chauhan	EE
190	Harsh verma	EE
191	Harshwardhan Chowdhury	EE
192	KHUSHAL	EE
193	Karan Aggarwal	EE
194	Karan Kumar Prajapat	EE
195	Kartikey	EE
196	Kishan Raj	EE
197	MAICHAL SINGH	EE
198	Mayank	EE
199	Mohit verma	EE
200	Murli Manohar	EE
201	Nirbhay Chaudhary	EE
202	Nishchay Singh	EE
203	PRATYUSH KRISHNA	EE
204	Paresh damor	EE
205	Pranjal Singh	EE
206	Priyanshu	EE
207	Pushpam kumar	EE
208	RAGHAV BADWALAS	EE
209	RAVIKANT SAINI	EE
210	Rahul kumar Mahawar	EE
211	Richesh kumar	EE
212	Rishabh bele	EE
213	Rudra Ashis Mishra	EE
214	SIDDHARTH NAGVANSI	EE
215	Sachin Singh parihar	EE
216	Sachin sains	EE
217	Saksham Chhetri	EE
218	Sanjeev Kumar	EE
219	Shivam Kumar	EE
220	Shreejay Kumar Garg	EE
221	Shubham Kumar	EE
222	Shubham chandravanshi	EE
223	Vansh Dhiman	EE
224	Vivek kumar gaurab	EE
225	Yajesh Boora	EE
226	Yuvraj Meena	EE
227	Abhishek	ECE
228	Abhishek Kumar	ECE
229	Adarsh Srivastava	ECE
230	Aakash yadav	ECE
231	Aniket Pandey	ECE

86	Nitya Nand Bhushan	CSE
87	PARTH MISHRA	CSE
88	Pankaj Choudhary	CSE
89	Piyush	CSE
90	Piyush Jaiswal	CSE
91	Piyush kumar	CSE
92	Prabhakar Jha	CSE
93	Prabhakar kumar	CSE
94	Prahlad kumar	CSE
95	Pranav mittal	CSE
96	Pranjal Mani Dwivedi	CSE
97	Prashant Saini	CSE
98	Praveen Gupta	CSE
99	Praveen Verma	CSE
100	Priyam Gupta	CSE
101	Priyanshu Kumar	CSE
102	Priyanshu Raj	CSE
103	Pulkit	CSE
104	R.P. Latheesh Roy	CSE
105	RAMCHANDRA NATH SIDDH	CSE
106	RANIT DERIA	CSE
107	RITIK KUMAR	CSE
108	Rahul Saini	CSE
109	Rahul kumar	CSE
110	Raj Patiyal	CSE
111	Rajesh Rao	CSE
112	Rajnish Kumar Yadav	CSE
113	Raju kumar gupta	CSE
114	Raman Kumar	CSE
115	Randeep Kumar Sharma	CSE
116	Rishabh Kumar Singh	CSE
117	Rishi pal	CSE
118	Ritesh Kumar	CSE
119	Rocky ranjan kumar	CSE
120	Rohan Kumar Pandey	CSE
121	Rohan Nitin Pol	CSE
122	Rohan kumar	CSE
123	Rohit Kumar	CSE
124	Rudra Prakash Pandey	CSE
125	SHASHWAT GUPTA	CSE
126	SHIVAM TIWARI	CSE
127	SOMNATH TIWARI	CSE
128	SUMIT SHARMA	CSE
129	Sachin Kashyap	CSE

232	Ankur	ECE
233	Anuj Singh Dhiryan	ECE
234	Ashutosh Sharma	ECE
235	Avinash Kumar	ECE
236	Ayush kumar	ECE
237	Deepak Kumar	ECE
238	Deepak Kumar berwal	ECE
239	Devesh Kumar Prajapati	ECE
240	Dhruv Bajoria	ECE
241	EMBERI RAJEEV	ECE
242	Gulshan kumar	ECE
243	Harsh Raj	ECE
244	Harsha Vardhan	ECE
245	Jatin yadav	ECE
246	Ketan Pant	ECE
247	Kundan giri	ECE
248	Maneesh kumar	ECE
249	Muhammad Omair	ECE
250	PITTADA LAXMANA	ECE
251	PRANAV SINGHAL	ECE
252	Pawan kumar	ECE
253	Pramodsingh	ECE
254	Pratyush Pandey	ECE
255	Pravin Kumar	ECE
256	Raj Shekkhar Roy	ECE
257	SHIVAM KUMAR	ECE
258	Shashank Kumar	ECE
259	Shivam Agarwal	ECE
260	Suraj kumar	ECE
261	Utkarsh Gupta	ECE
262	Utkarsh mishra	ECE
263	Vikash Kumar	ECE
264	Vikash kumar	ECE
265	Vivek	ECE
266	Vivek mishra	ECE
267	shivam patel	ECE
268	Anurag Kumar	ECE
269	Aman kumar jha	ME
270	Anoop kumar pandey	ME
271	Billiam sagar	ME
272	D.sairam	ME
273	INDRAJEET BHARATI	ME
274	KARAN SINGH	ME
275	Natesh Kumar	ME

130	Sachin Kumar	CSE
131	Sagar	CSE
132	Sagar Haldhar	CSE
133	Sagar Majumder	CSE
134	Sahil Shukla	CSE
135	Sai Varun	CSE
136	Satyajeet Kumar	CSE
137	Saurabh kumar mishra	CSE
138	Shankaracharya Rai	CSE
139	Sharvan kumar	CSE
140	Shivam Singh Patel	CSE
141	Shivansh	CSE
142	Shivansh Srivastava	CSE
143	Shubham sinha	CSE
144	Siddharth verma	CSE
145	Sidharth Sharma	CSE

276	Rishabh Choudhary	ME
277	TARUN KUMAR	ME
278	Abhishek Mishra	ME
279	Aditya Kumar	ME
280	Aryan Yadav	ME
281	Dilkhush Meena	ME
282	HArdik saini	ME
283	Kinan Saleem	ME
284	Navin Singh Rawat	ME
285	SANDEEP KUMAR SAMRAT	ME
286	SHUBHAM BANERJEE	ME
287	Tsering	ME
288	Vikash pandey	ME
289	Yogeshwar Verma	ME
290	kanisth saluja	ME
291	Ashutosh kumar	ME