Government Polytechnic, Pune

Department of

Electronics and Telecommunication

News Letter (2023-24)



EDITED BY

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About Us

Government Polytechnic, Pune, an autonomous institute of Government of Maharashtra is established in the year 1957. Institute is awarded academic autonomy in May 1994. It houses in its 28 acre campus: main building, Computer Engineering, Information Technology and Science department building, Electronics and DDGM department building, staff quarters, workshop building, exam section conference halls, building, hostels, classrooms for various disciplines, library, canteen, mess, post office, cooperative stores, etc.

Over the last four decades, several thousand diploma engineers passed out from various disciplines are contributing their expertise for industries and various Government departments. Institute has won several prestigious awards in academics as well as sociocultural activities. Overall, contribution of this institute in technical education of country and development of a progressive society is significant.

Vision

To develop self-reliant, versatile, innovative, quality conscious engineers for betterment of society.

Mission

- 1. Imparting updated curriculum in association with stakeholders.
- 2. Providing with the state of art infrastructure & facilities.
- 3. Set up strategic alliance with industries.
- 4. Enhancing e-governance.
- 5. Continuous development of faculty & staff.

Department of Electronics and Telecommunication

Department was established in year 1967. It Started functioning under Autonomous Polytechnic and was awarded Academic Autonomy Since 1994.

Department has intake of 120, with two shifts.

	Regular	Minority
Intake	60	60

Department Vision

To develop skilled Electronic and Telecommunication engineer to meet challenges of industry and serve for betterment of society.

Department Mission

- M1: Imparting quality education embedded with professional ethics and entrepreneur qualities by promoting industry institute interaction.
- M2: Providing technical knowledge and skills to the students to accept contemporary challenges in the field of electronics and telecommunication engineering through modernization of infrastructure and facilities.
- > M3: Motivating students to undertake multidisciplinary innovative projects.
- M4: Encouraging up-gradation of technical and soft skill set of students, faculty and staff.

PEO's (Program educational objective)

- > **PEO1:** To attain excellence in the profession by applying fundamental and disciplinary knowledge to provide solutions for the societal challenges.
- > **PEO2:**To be able to demonstrate entrepreneurship skills and practice lifelong learning for continuous career progression.
- > **PEO3:**To utilize their knowledge, skills to find creative and innovative solutions to engineering problems in a multidisciplinary work environment.

PSO's (Program Specific outcomes)

Student will be able to:

- Apply concepts in the field of Semiconductor technology, electronic Communication, Instrumentation & embedded system.
- Use conceptual and practical knowledge of electronic & telecommunication engineering with professional ethics to provide effective solutions to social and environmental issues in multidisciplinary systems.
- Assemble, test and analyse the PCB (electronic) circuits.

PO (Program outcomes)

- 1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the electronic & telecommunication engineering problems.
- 2. **Problem analysis:** Identify and analyse well defined electronic & telecommunication engineering problems using discipline specific knowledge.
- 3. **Design/Development of solutions:** Design solutions for well-defined technical problems which will support design of system components or process to meet specified need in electronic & telecommunication engineering.
- 4. Engineering tools, Experimentation and Testing: Apply modern electronic & telecommunication engineering tools and appropriate technique to demonstrate & practice experimental measurements.
- 5. Engineering practice for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment & Ethical Practices.
- 6. **Project& Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities in multidisciplinary field.
- 7. **Life-long Learning:** Ability to analyse individual, societal needs and engage in updating in the context of technological changes.

E&TC Department Faculty

Sr.N	Name of Faculty	Qualification	Designation
1	MrS.S.Prabhune	M.E (ET)	H.O.D
2	Dr. S. P. Narote	Ph.D. (E&TC)	H.O.D
3	Mr. A. D. Vikhankar	M.E.(ET)	Lecturer (Sl. Grade)
4	Mrs.V.G. Mahendra	M.E. (E&TC)	Lecturer
5	Mr.N. D. Toradmal	M.E. (E&TC)	Lecturer
6	Mrs. J.J. Pathan	M.E. (E&TC)	Lecturer
7	Mrs. C. D. Phophale	M.E. (E&TC)	Lecturer
8	Mrs. P. G. Gahukar	M.E.(E&TC)	Lecturer
9	Mrs. R. S. Deulkar	B.E. (E&TC)	Lecturer
10	Mrs.M. S. Datar	M.E (ET)	Lecturer
11	Mrs. N. S. Bakade	M.E. (ET)	Lecturer
12	Mrs. P. V. Lengare	M.Tech.(E&TC)	Lecturer
13	Mrs. A.P.Ghode	M.E. (E&TC)	Lecturer

E & TC Supporting-Staff

Sr.No.	Name of Supporting Staff	Designation
1	Mr. Mohan Kadu	Lab Assistant
2	Smt. Snehal Dattatray Khadse	Instructor
3	Mr. Ragini Bjosale	Lab Assistant
4	Mr. Deepak S.Gangawane	Hamal
5	Mr. Sarju Bagade	Hamal
6	Mr.Gautam Jagtap	Peon
7	Mr. Santosh Bhamane	Hamal
8.	Mr.Ransingh Chavhan	Shipai

Newsletter committee members

Sr. No.	Name of Committee Member	Role
1	Mrs.P.V.Lengare, Mrs.P.G.Gahukar	Editor
2	Ms.Anita Lokare	Member
3	Ms.Sai Bhosale	Member
4	Mr.Aryan Bhalkar	Member
5	Mr.Mahadev Kamble	Member
6	Mr. Samartha Joshi	Member
7	Ms.sangmitra Gitte	Member

Events

- 1. A One week AICTE ATAL FDP Program
- 2. Project Competition at Lonavala
- 3. Expert Lectures
- 4. Industrial Visits
- 5. ETESA 2023-24 Events
- 6. Students Corner

A One week AICTE ATAL FDP on Internet of Things (IoT) in Smart City Management

A one week AICTE ATAL Faculty Development Program (FDP) on "Internet of Things (IoT) in smart management " was organized by department of Electronics and Telecommunication Engineering, Government Polytechnic Pune from 4th to 9th December 2023. The coordinator of the program was Dr. S. P. Narote (HOD - E& TC) and Coordinator was Mr.A.D.Vikhankar (Lecturer -E&TC).

From all Maharashtra total 35 participants had participated in this FDP. The pioneers from various fields were called as resource person for this FDP. The two industrial visits were arranged under the FDP one at Smart City Centre Pune and other at CDAC Param Centre Pune.

The program was inaugurated at hands of Dr. D. V. Jadhav (Joint director Regional Office, Pune), Mr. M. S. Usmani (Deputy Secretary, Technical R.B.T.E. Pune) ,Dr.V.S. Bandal(Principal,GPP), Mr.V. B. Tambe (Vice Principal& HOD (Civil) GPP) and Brigadier Vilas Deogirikar (Retd.) , Mr.Abhijit Deogirikar (Director- Coppercloud) and Mr. S. S. Prabhune HOD (E&TC).

The inaugural welcome was addressed was Smt. A.P. Ghode (Lecturer -E&TC). The chief guest of valedictory function was Dr. Mahendra Chitlange (Secretary, MSBTE). The valedictory of the FDP was conducted by Smt. P.V.Lengare (Lecturer - E&TC). All the teaching and non-teaching faculty of the E&TC department had worked hard for the successful conduction of the FDP.



Participation in Project Competition

On 15th March, 2024 Project Competition at Lonavala. In which there are 30 groups was involved. Total 120 students was involved in this competition.

The main purpose this competition is to provide opportunity to the students to showcase their creative ideas so their creativity can be nurtured well to. Also, their peers will be able to appreciate the innovation done by their classmates that will also inspire them to do the same in some manner.





On 15th March,2024 **Project competition** at Lonavala

Expert Lecture: Career Opportunities In IOT

3rd November 2024, an expert lecture was arranged on "**Career Opportunities In IOT**" by Electronics & Telecommunication department for 3r^d Year students and was conducted by Dr.sankit kassa .This lecture describes Career Opportunities in IOT.

Also they Provide Information About

- 1. IoT Career Opportunities
- 2. Responsibilities of an IoT Professional
- 3. Skills Required

The Internet of Things is a field that is growing exponentially. It is changing the way we live and work, and will open up opportunities that we weren't even aware of. It is predicted that IoT has the potential to increase global corporate profits by 21% by 2022. Also, forecasts suggest that there will be more than 75 billion IoT-connected devices in use. As a result of IoT development, numerous career opportunities will appear on the market. Generally, the career fields within IoT are related to the development of an IoT product (hardware design, testing, and integration) and embedded systems cyber security.



Expert Lecture: AI, Machine Learning & IoT Innovation

On 21st March 2024, an expert lecture was arranged on "AI, Machine Learning & IoT Innovation" by Electronics & Telecommunication department for 3rd year students and was conducted by Mr. Aniket Ingvale ,Dr.Prachi Joshi & Maturesh Kulkarni. This lecture described the Important of AI, Machine Learning & IoT Innovation ,Emerging global trends in IoT.

The network of physical things that are fixed with software, sensors, and different technologies for the purpose of swapping and connecting data with other systems and devices over the Internet is known as the Internet of Things (IoT).

The Internet of Things (IoT) has experienced incredible growth, thanks to technological advancements and the surge in demand for instant insights into digital transformation solutions and activities.

As we venture into 2024 and beyond, the future of IoT appears more promising than ever, with a multitude of emerging trends and forecasts. From the progress in Machine Learning and Artificial Intelligence to the emergence of smart cities and interconnected supply chains, the potential for IoT seems boundless.



An expert lecture was arranged on "AI, Machine Learning & IoT Innovation"

Industrial Visit: Wireless Police Training Center

On 16 Feb 2024 an industrial visit was arranged to "**Wireless Police Training Center Pashan**" by Electronics & Telecommunication department for Third year students. This visit was all about Wireless Police training. The Police Wireless Message Department is a critical unit within law enforcement agencies responsible for transmitting and receiving real-time information, including emergency calls, crime alerts, and operational updates, using wireless communication systems. They play a crucial role in coordinating responses and ensuring efficient communication among officers on the ground.



visit arranged at Wireless Police training Centre

Industrial Visit: Educational Multimedia Research Center

On 13 October,2023 an industrial visit was arranged to "**Educational Multimedia Research Center Pune**" by Electronics & Telecommunication department for Third year students . This visit was all about Educational Multimedia Research Center.

Educational Multimedia Research Centre (EMMRC), Pune is one of the 21 EMMRCs across India. Established in 1983, EMMRC Pune is located in the premises of Savitribai Phule Pune University. The Centre is established under the aegis of Consortium of Educational Communication (CEC) and fully funded by the University Grants Commission (UGC). EMMRC Pune produces various educational content, such as syllabus based audio-visual modules, expert discussions, and documentary films as enrichment programme.





Industrial Visit : All India Radio Akashwani, Hadapsar

This industrial visit was arranged to "All **India Radio Aakashwani, Hadpasar**" by Electronics & Telecommunication department for second year students. This visit was all about Aakashwani.

In 1956 the name AKASHVANI was adopted for the National Broadcaster. The **Vividh Bharat**i Service was launched in 1957 with popular film music as its main component. The phenomenal growth achieved by All India Radio has made it one of the largest media organisations in the world.' Akashvani airs a variety of literary, educational, and entertaining programmes. Additionally, it premieres specific programmes for women, youth, farmers, and labourers. The 'Vividh Bharati' programmes are broadcast in 146 Indian dialects in addition to 24 regional languages.



Industrial Visit: Transtech Systems, Pune (2022-23)

This industrial visit was arranged to "**Transtech system**" by Electronics & Telecommunication department for second year students. This visit was all about Transtech system.

Transtech Systems in Aranyeshwar-Parvati Darshan, Pune is known to satisfactorily cater to the demands of its customer base. The business came into existence in 2014 and has, since then, been a known name in its field.India's leading B2B market place, Jd Mart ensures engaging in business activities is a seamless process for small and medium enterprises as well as large businesses. In a wake to enable these businesses to reach their audience, this portal lets them showcase their offerings in terms of the products and/or services through a digital catalog.



Industrial Visit: Transtech Systems, Pune (2023-24)

This industrial visit was arranged to "**Transtech system**" by Electronics & Telecommunication department First year students (date: 7/3/2024). This visit was all about Transtech system.

We have learnt their UPS:An Uninterruptible Power Supply (UPS) is an electrical apparatus that provides emergency power to a load when the input power source, typically the main power, fails.

Online UPS (Double-Conversion UPS): In this system, power is always converted twice first to DC, and then back to AC. This ensures that the output power is completely isolated from the input, maintaining a constant, clean, and reliable power source regardless of disturbances in the input power. Online UPS systems are used in critical applications where power quality is essential.

.Standby UPS (Offline UPS): This is the most basic type of UPS and is suitable for home or small office environments. It remains idle until a power failure occurs, at which point it switches to battery power by mechanically switching the load from utility power to its own power source.

Key Components

1.Rectifier

2.Batteries

3.Inverter

4.Static Switch

5. Filters and Surge Protection



Industrial Visit: Infinity automation Solution, Pune (2023-24)

This industrial visit was arranged to "**Infinity automation Solution**" by Electronics & Telecommunication department First year students (date: 03/03/2024).



2Days PCB designing workshop

2 days PCB designing workshop arranged by E&TC department on 16 and 17 march 2024. Total 90 students from second year and third year actively participated in workshop.



ETESA Event: Quiz Competition

A quiz competition was held by departments student organization **ETESA** the topic of the competition was "**ETQUIZ-2023-24**" competition was held under Mr..S .S. Prabhune (HOD of E&TC dept.) & Dr.S.P.Narote (HOD of E&TC dept.)

The competition was held in Two Stages: Stage 1 was a written qualifying round held on **20th January ,2022**.Students of E&TC Department participated Enthusiastically. 62 Students participated in the competition of the departments. This qualification round was MCQ based on General Knowledge and Technical.



A quiz competition was held by department student's organization ETESA on 4th November 2023

ETESA Event: Essay Competition Event

An Essay Writing Competition was held by Departments Student Organization ETESA & the topic of the competition was "Essay Writing". The Competition was held on Thursday 22 Feb,2024 on the occasion of Chhatrapati Shivaji Maharaj Birth Anniversary. The competition was held under the guidance of Mrs.P.G.Gahukar

The competition was simple and fair as the topic was decided students were supposed to write an essay on the given topic . The topic was given prior 2-3 days before the competition . About 20 Students participated in the competition of Both the department.





Essay Writing Competition was held by Departments Student Organization ETESA on 22th February 2023

ETESA Event: Poster Presentation Competition

The Electronics & Telecommunication Department of Government Polytechnic, Pune had organized Poster Presentation Competition on November 04, 2023. The competition was held to focus on the importance of Project practical implementations of innovative ideas in Electronics & Telecommunication. About 35 Poster Presentation groups actively participated in this event. The program began with the inaugural ceremony at about 11:00 AM by Mr.V.G.Tambe (Vice Principal), Shri.S.S.Prabhune (HOD E&TC) & Dr.S.P.Narote (HOD E&TC) Welcomed the Guests, Judges, Faculty and participants. The judges carefully monitored the posters & gave their valuable suggestions for improvement to the students. Based on the evaluation done by judges and faculty Three Best Poster were selected.







Green Club house oath



Tree plantation by NSS



Blood Donation Camp





Dept. of E &TC, Government Polytechnic, Pune

Students Corner











Travelogue

प्रवासवर्णन RANKA-DATE प्रत्येक व्यक्ती आपत्या आयुख्यात कार्द्य ना कार्द्य प्रवास नक्कीच करता त्या आठवणी आपत्या जिवनातील अविस्मरणीय आठवणी अस्ताता. त्या आठवका आपल्याकडून क्वी च विसरक्यां जाउं द्राकत नाही. त्रवासंहा एक वेठानाच सुखद अनुभव असतो. असा अनुभव जो की सतिशय सुभवायक असती. प्रवासाची एक बेठाळीच मना असते . आपन आपत्था आधुव्याता थ्यूप सार प्रवास करता असता, परत त्यातीला काही भवास असे असतात किंजे आपना काहीर विस्तर काकत नाही, प्रवासावरस्थान नविन माणस, नावेन सोबता, नावन शहर छूप काही मवीन बद्यायलग मिकते. आणि ते आपल्या मनात Egy Eller El Dard RIEMINT. काही महिन्या पूर्वी भी मादने मूळगाव सोइन शिहाणाकरिता पुण'या माथानगरी महय आला होता. तासां हा प्रवास अतिशय रोमाचक, साहसिक आगी मनोर्डमक होता, पण त्यातच आपले घर आपले आह्यडिल, आपले मिन सोडून जाण्यान दुः आ देखिल होतो. पण काथ करणार ना रोवटी शिकाणाकरिता काही त्याना तर करावाच लानतो. सा प्रवासासाठी राजीची वेळ निवडली आजी माइन्धा पुठा प्रवासाची सुकवात झाला तशा मनात खूप जिती होती कारण आयुष्यात पार्टल्यादा आपले घर सोइन इतल्या लाब नियाला होतो. आणि मनात एक आजद देखिल होता की आपण एका नविन कारशत चालला. तीरो नविन माणस मिडतील, माबेन मित्र मिठतील स्टब्देन. Aryan

RANKA-DVIE 180 Youren जाताला हा खसचा प्रवास माझ्या ाजवनातीता युकु आवेर भरणीय क झूठा होता , भाइया प्रवासाल भी एकटाच माझा सोवती होतो. वः मह्य प्रवास करताच भी खिडकी कडील सीट 924 समावता आणि हब्द हब्द ७२२गा वस सूरू झाली आणि बस्ते गारी पळडायला स्रेश्वात छेला. रात्रीची वेळ असल्याने बाहरचे दृश्य काही आस दिसत जब्हते. पग ताहिही सी रिंडिको त्रेन जे काही दिसेल त्याचा आन्द् येत होता, संभाजीनगर काहरात्रन जाताना राभी के २२ल्यावरिल लागलेले दिवे आपले काम राजपन बलावत होते. आणि तो नजारा अख्ती मनमोहक होली होती. जसा जसा तेक होत होला तर ्राहर संपत्ने आांगे पर्वता, होता, डोंगेर, दन्याचा Halen wich Shiell. हे मनमाहक जमारे बहता बहता मला मूळ लाभाध्यता लाभली, नार्शा म्हणून भी बॅभेतून चिप्त आणि बिस्कीट चे पॅकट काढल, मस्त् पैकी त्याचा चवाद घेत भी पृढ्वा प्रवास करूद लागलो. व्वता बहाता २ वाजले होते. आर आणि शहाद झोपूले देखिल होते, म्हूकून मीही इनापण्याचा निर्णय घेतला. स्कावी जेव्हा मला जाठा आली तेग्टा 5: 30 व्रापले होते, बाहेर हल्ला हल्ला प्रकार पडला होता आहे झाडे - झुरुपे, शेतातील पेके हे स्मुंदर कोवळ्या उन्हाने ल्हाउन् मिवाली होती: त्यामुळ सी अजुन आतुरतेने बाहेर बंधू CIIBICIT! मोठे प्रवृत्त आणि लांब- लांब २३ने मला रामापित करंग होता. खूप स्तूदर व आरुषक दृष्य भी माझ्या

DATE / / PAGE ट्रोक्यात साहवत होता आणी काही सीदर्धाची कोटे मी माझ्या मोबाईला मह्ये टिपू लांगला. बयता, व्यता 6-7 तासांच्या प्रवासानंतर आमच्या बसने पुण शहरात मवेश केला. · मुठो तिथे कार्य 300 अहि At 1035 पहिल्यापास्त्र येकल आलेग् होलो, आाठी पुण्यात प्रवेश केल्थानतर ह्या महणा चा छारा अछ कळाला. पुव्यातील मोड्या मोड्या इमारता पाहन मी अन्यवित टोल होली त्यामुळे मनालाल उत्साह अखनन्म वाढ्ल ठोला. तेवुढ्याता मला घरूची आठवठा झाली आणी विचार आला कि आपन लगा क जग होक्यात हा जेही पाहिली तरी आई पेक्सा क्युंदर, हथा जगात काही च नाही. त्या सहवासान्या आनंद आपठा मोफ काकल माही. कसा तरी क्वत : ला 131151 सावरता सी आपल्या आयुक्याता काहीतारी करक्यान्या निर्णेय घोतला आणि त्था वाटेन मार्शस्य झाला. अश्या पुद्दधतीने हा प्रवास माइया जिवनातील अविस्मरणीय प्रवास होता. A shot on moto e40

By Aryan Bhalkar

2203502(E&TC)





E.No. 2103015 Sanika Bhinge

Poem

रखुमाई!

सावळा तो विठूराया जरी विटेवरी उभा, रखुमाई शिवाय कुठे येतीये त्या विठ्ठलाला शोभा! पंढरी येऊन आम्ही बापाला आमच्या भेटणार, पण रखुमाईच नसेल तिथे तर आम्ही आई कोणाला म्हणणार! विठ्ठलाचं जेवढं नाम घेतो तेवढं रखुमाईचं सुद्धा घेऊया की, आणि बापाचा जेवढा आदर करतो तेवढाच आईचा सुद्धा करूया की! पण रखुमाई शिवाय विठोबाचा संसार पुरा होत नाही, आणि पंढरीला आल्यावर आईला भेटल्याखेरीज जात नाही!

GPP

डिप्लोमा झाल्यावर प्रत्येक पोरगं howntown ला जाणारे, पण GPP हे नाव माझ्या कायम लक्षात राहणारे!! या 6 महिन्यातल्या आठवणी 60 वर्ष डोक्यात राहतील ना, आणि GPP मधली पोरं बाहेर काय भाव खातील ना? काय ते शिक्षक,काय ते lecture,okay मधी सगळं असायचं, पण computer/IT ला आल्यावर ना स्वर्गात आल्यासारखं वाटायचं!! नाही अप्सरा वगैरे काही नाही आम्ही पाणी भरायला यायचो, आणि पाणी भरून झाल्यावर सारा निसर्ग पालथा घालायचो!! डिपार्टमेंट असुद्या कितीही आमचं एकी हेच बळ ए, आणि सेमिस्टरभर बोंबलत फिरण्याचं बॅकलॉग हेच फळ ए! Xerox centre,water cooler म्हातारपणात सगळं आठवणारे, आणि GPP हे नाव माझ्या कायम लक्षात राहणारे!!

> भांडणाचा संसार! लैला-मजनू कशाला, आपण टॉम ॲंड जेरी होऊयात का! प्रेम-बीम खड्ड्यात जावो, आपण आयुष्यभर असच भांडूयात का! लग्न करूयात वाट्लस तर भांडण अजून वाढवायला,

एकमेकांच्याच नावाने एकमेकांना चिडवायला!! तू जो मुद्दा मांडशील त्याच्या विरुद्धच बोलेल मी, उखाण्यातुन सुद्धा प्रेम वाटेल असा taunt मारेल मी! स्वयंपाक तुला येत नाही हे माहितीये की मला, हातात येईल ते फेकून मारतेस हे सुद्धा कळतंय मला! म्हणून म्हणतो येऊयात एकत्र आयुष्यभर असच भांडण्यासाठी, प्रेमाच्या या खोट्या दुनियेत भांडणाचा संसार थाटन्यासाठी!

आई!

अक्कल नाहीये तुला असं म्हणून जि सारखी माझ्यावर चिडते, आई तू माझ्यावर इतकं प्रेम कसं करते! काम सांगतेस मला पण ते माझ्याकडून होतं का? आणि खरंच तुम्ही मला चतकोर भाकरीवर विकत घेतल का? अस होतं तरी मी आजारी असताना रात्रभर तू जागलीस ना ? उपाशीपोटी तू माझ्या उषाशि बसून राहिलीस ना? आता इतकं केलायेस माझ्यासाठी तुझे उपकार कसे फेडणार ग, हा तुझा मुलगा तुला एकदिवशी proud feel करणार ग!

भास!

हा इतकापण मी उंच नाहीये आणि एवढीपण ती लहान नाहीये, अमिताभ जयाची जोडी दिसायला मी विजय दीनानाथ चौहान नाहीये! हा प्रेम म्हणजे काय फक्त relation-bilation असतं का? तिच्याबद्दल कोणी वाईट त्याला गप्प करण नसतं का? 1 दिवस ती नसेल तर मन बैचैन होऊन जातं, आणि तिची आठवण आल्यावर डोळ्यात पाणी का बरं येत? काळजी बिलजी नाही कदाचित मी खूप घाबरत असेल तिला, आणि आयुष्याच्या प्रत्येक क्षणाला तिचे भास होतायेत मला!

> Yash Jori (E&TC)



Introduction:

ChatGPT is an AI-powered conversational model developed by OpenAI. It is a language generation model trained on a large corpus of text data and is capable of generating human-like responses to a wide range of prompts. ChatGPT can answer questions, engage in conversations, summarize text, provide recommendations, and perform various other language-related tasks.

ChatGPT is built on the transformer architecture, which is a deep neural network that uses self-attention mechanisms to process input sequences and generate outputs. The model is fine-tuned on specific tasks, such as question answering or conversation generation, to improve its performance in those areas.

ChatGPT has become a popular tool for building chatbots and conversational interfaces for various applications, such as customer service, information retrieval, and entertainment. However, like all AI models, it is not perfect and can sometimes generate responses that are inaccurate, inappropriate, or inconsistent with human-like language. To address these limitations, ongoing research is being conducted to improve the quality and reliability of language models like ChatGPT.

Architecture of ChatGPT:

The architecture of ChatGPT is based on the transformer network, which is a type of deep neural network designed for processing sequential data, such as text. The transformer network was introduced in 2017 by Vaswani et al. in their paper "Attention is All You Need".

In a transformer network, the input data is processed through a series of self-attention mechanisms and feedforward layers. The self-attention mechanism allows the model to weigh the importance of different parts of the input sequence, allowing it to selectively focus on certain aspects of the data and make decisions based on that information.

The basic building block of the transformer network is the attention layer, which consists of multiple parallel attention heads that attend to different parts of the input sequence in parallel. The attention scores are then used to compute a weighted sum of the input representations, which is used as the input to the next layer.

The output of the transformer network is generated through a series of feedforward layers, which are fully connected neural networks that map the input representations to the final output. The output can be used for various language-related tasks, such as text generation, question answering, or sentiment analysis.

In ChatGPT, the transformer network is fine-tuned on a large corpus of text data, allowing it to generate human-like responses to a wide range of prompts. The size and capacity of the model can be adjusted depending on the task and the amount of training data available. Additionally, the model can be fine-tuned further on specific tasks or domains to improve its performance in those areas.

Applications of ChatGPT:

ChatGPT has a wide range of applications in various industries and fields due to its ability to generate human-like language. Some of the most common applications include:

- Chatbots: ChatGPT can be used to build conversational interfaces for websites, mobile apps, and other platforms. Chatbots powered by ChatGPT can handle customer service inquiries, provide product recommendations, and assist with online transactions, among other things.
- Information Retrieval: ChatGPT can be used to answer questions, summarize text, and provide recommendations, making it a valuable tool for information retrieval systems.
- Customer Service: ChatGPT can be integrated into customer service systems to handle routine inquiries and provide quick and accurate responses to customers.
- Text Generation: ChatGPT can be used to generate text, such as news articles, product descriptions, and social media posts, allowing businesses to automate content creation and save time and resources.
- Language Translation: ChatGPT can be trained on parallel texts in multiple languages to perform machine translation, enabling organizations to quickly translate text and other content into different languages.
- Sentiment Analysis: ChatGPT can be trained to analyze the sentiment of text, allowing organizations to monitor and understand the sentiment of customer feedback and social media posts, among other things.

These are just a few examples of the many potential applications of ChatGPT. As the field of AI continues to advance, it is likely that new and innovative applications for ChatGPT and other language models will emerge in the future.

ChatGPT in various Sectors:

ChatGPT and other AI-powered conversational models are being used across a variety of industries, including:

• E-commerce: ChatGPT is being used to build conversational interfaces for ecommerce websites and mobile apps, allowing customers to search for products, make purchases, and receive customer service support through chatbots.

- Healthcare: ChatGPT is being used to develop virtual health assistants that can answer patient questions, provide health information, and assist with appointment scheduling and other tasks.
- Finance: ChatGPT is being used in the finance industry to automate customer service, provide investment recommendations, and assist with financial planning.
- Telecommunications: ChatGPT is being used in the telecommunications industry to provide customer service support, resolve technical issues, and assist with account management and billing.
- Transportation: ChatGPT is being used in the transportation industry to build conversational interfaces for ride-hailing and ride-sharing apps, allowing customers to book rides and receive support through chatbots.
- Education: ChatGPT is being used in the education industry to build virtual tutors and language learning platforms that can provide personalized support and feedback to students.

Limitations of ChatGPT:

- Data Bias: ChatGPT is trained on large amounts of text data, which can introduce biases and inaccuracies into the model's output. For example, if the training data contains biased or incorrect information, the model will be likely to replicate those biases in its output.
- Lack of Common Sense: Despite its advanced language capabilities, ChatGPT lacks a deep understanding of the world and human behavior, and may struggle to respond to complex questions or scenarios that require common sense reasoning.
- Limited Contextual Awareness: ChatGPT generates responses based on the input prompt, but has limited ability to maintain a longer-term context or remember previous interactions. This can make it difficult for the model to understand the context of a conversation and respond appropriately.
- Privacy and Security Concerns: ChatGPT and other AI models are trained on large amounts of personal data, which can raise privacy and security concerns. It is important to carefully manage the data used to train these models and ensure that appropriate privacy and security measures are in place.
- Ethical Concerns: AI-powered conversational models like ChatGPT raise a number of ethical concerns, including the potential to automate jobs and the responsibility of organizations and individuals to ensure that the technology is used in a responsible and ethical manner.

Conclusion:

In conclusion, ChatGPT is a powerful language model developed by OpenAI that has the ability to generate human-like text. The model has a wide range of applications across various industries, including e-commerce, healthcare, finance, telecommunications, transportation, and education. However, like any technology, ChatGPT has its limitations, including data bias, a lack of common sense, limited contextual awareness, privacy and security concerns, and ethical concerns.

Despite these limitations, the development of ChatGPT represents a major milestone in the field of AI and has the potential to revolutionize the way we interact with technology and each other. As the field of AI continues to advance, it will be interesting to see how ChatGPT and other AI-powered conversational models are further developed and integrated into our daily lives.

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Students Article

Instagram and Teenagers: A Love-Hate Relationship

In the world of social media, Instagram has become a ubiquitous presence in the lives of teenagers. With over 1 billion monthly active users, the platform provides a space for young people to connect with friends, express themselves creatively, and consume content. However, as with any social media platform, there are both positive and negative aspects to the relationship between Instagram and teenagers.

On the positive side, Instagram provides a space for increased connectivity and communication. Teenagers can use the platform to keep in touch with friends and family members, regardless of distance. Additionally, Instagram provides an outlet for self-expression and creativity, with the ability to share photos, videos, and captions with a wider audience.

However, the negative aspects of Instagram cannot be ignored. The platform can be a source of comparison and low self-esteem, as users are constantly bombarded with images of seemingly perfect lives. Additionally, the constant stimulation provided by the platform can lead to addiction, with teenagers spending excessive amounts of time on the app. Finally, the anonymity of the platform can provide a breeding ground for cyberbullying, which can have serious emotional and mental health impacts on its victims.

So, what can be done to mitigate the negative aspects of the relationship between Instagram and teenagers? Firstly, it is important for parents, teachers, and other adults to be aware of the potential impacts of social media and to have open and honest conversations with teenagers about responsible use. This includes setting limits on screen time and encouraging alternative activities, such as exercise and face-to-face social interaction.

Additionally, it is crucial for users to be mindful of the content they consume and share on Instagram. This means being aware of the potential impacts of comparing oneself to others and making an effort to curate a feed that is positive and uplifting.

In conclusion, the relationship between Instagram and teenagers is complex, with both positive and negative aspects. However, by being aware of the potential impacts of the platform and making a conscious effort to use it responsibly, the negative aspects can be minimized and the positive aspects can be fully realized. As with any technology, the key is to find a balance that works for each individual, promoting well-being and positive relationships in the digital age.

Sharayu Jaybhay

IIInd year E&TC (2203508)

E&TC Placement Data Year 2022-23

	Sr. No	Enrollment No.	Name Of Student	Name Of Employer	Package
	1.		Atul Dhananjay Dharmadhikari	Vaibhav Tech.solution	3.2 lack per annum

	Sr. No	Enrollment No.	Name Of Student	Name Of Employer	Package
	2.		Shivaraj Balaji Gade	Tata technologies ltd.Pune	2.15 lack per annum
	Sr. No	Enrollment No.	Name Of Student	Name Of Employer	Package
	2.		Mohammad Sakib Nijamuddin Inamdar	Tata technologies ltd.Pune	2.15 lack per annum

Toppers Year 2022-23

C3 DIV	L3 DIV
1 st topper C3 Div	1 st topper L3 Div
Atharv Yogeshchandra Khare- 2003041	Priya Sanjay Mansuke- 2023039
Passout year 2022-23	Passout year 2022-23
Percentage: 94.32%	Percentage: 94.90%
2 nd topper C3 Div	2 nd topper L3 Div
Mrunal Milind Kulkarni	Manasi Anil Shete
Passout year 2022-23	Passout year 2022-23
Percentage: 93%	Percentage: 91.35%

