

ESPI CE

ADSPI CE

PROSPI CE

Espi ce, Adspi ce, Prospi ce

E D I T O R



"...the whole is not, as it were, a mere heap, but the totality is something besides the parts, there is a cause of unity ..."

We attribute the profound revelation of the whole being greater than the sum of its parts to the philosopher Aristotle.

The Headliner, The Bigfoot, attempts to quantify IIT's environmental impact in the form of Carbon footprint calculation based on data and observations procured from relevant sources on campus. The idea behind our study is that while we are aware of the big picture, we fail to identify how the larger consequences percolate to the actions of each one of us, magnifying across every progressing level as we tread along the path of chaos theory and irreversible states of increasing entropy.

Weave, "Differently Tabled", captures the epiphany in the life of two men as pieces of their lives come together at a poker table, years after their paths crossed and changed the way they could ever be.

Impressions, "Bee You" is an engaging quiz written as a poem which you could skim through for fun, getting to espouse the bee you are! In addition, one may ponder upon the underlying idea of how our traits define us and our similarities and differences chart out our role and interactions in society, contributing to the ecosystem in ways beyond our individual capabilities (also, save bees! :)).

Lastly, "A Stitch in Time" is a photo story that speaks for itself. You may choose to appreciate the synergy that manifests in every process that takes place, such as the emergence of consciousness in a sufficiently complex mind, mind in a sufficiently complex brain, and brain emerging in a sufficiently complex nervous system. You may dismiss it as just incomprehensible metaphysical talk and a deception of the mathematical tool of "sum" being misused to add up non homogeneity, thus explaining the complexity that our erstwhile mind cannot comprehend. Or you may choose to let your brain rest indifferently on the matter, while flipping through the pages.

Contrary to what Orwell's dystopian world would allow, you may, in our magazine, Add One Out, as you like it :)

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Quoting the Director Professor V Ramgopal Rao, “We have seen a drastic change in the environment in the last few years and, if not checked, this can be detrimental. While policy formulation will be done at the government level, there is an urgent need for academic institutions to scientifically analyse the data emanating from the atmosphere and provide the right unbiased inputs to the government”. In a first of its kind study conducted for our campus, we estimate the Carbon Footprint.

The Overstory

No matter who we are, where we live and what we do, we all leave an impact on the environment. Carbon Footprint is often used as a touchstone of measuring this impact, and refers to the amount of greenhouse gases, primarily Carbon Dioxide, released into the atmosphere by an individual, organization or community. We assessed various factors contributing to the emissions: electricity consumption, diesel usage, vehicles criss crossing the campus and the paper we use. Additionally, our team interviewed multiple people at the substations, Security Control Room, DG Set Areas, and Accounts office and procured facts and figures to delve deeper into the issue addressing the elephant in the room.

Our aim is to assess the carbon footprint as well as other environmental indicators as a means of identifying the impact that the institute has on the environment.

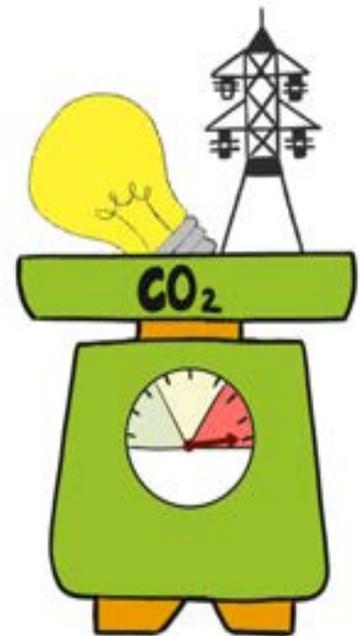
This may then allow us to use this as a baseline by which future improvements can be measured against, use the data in communicating the environmental performance and to external audiences, and prioritise action in areas of greatest environmental impact or savings potential.

The areas on campus are the MS building, blocks, LHC, resideareas near boys’ and girls’ hostels, DMS, Bharti and SIT, the canteen and synergy buildings, various eateries and 13 hostels. We have primarily covered the institutional area and motor vehicle emissions by those owned by the institute in our study.

The demographics in college are as

Number of students	8703
Number of faculty members	776
Administrative employees	176
Staff	~300
Others (including families, shop owners etc)	~500

One of the main human activities that contributes to CO₂ emissions is burning of fossil fuels (coal, natural gas, oil) for the generation of electricity. There are three main substations on campus each receiving electricity supply from BSES, and the Diesel Generator, that is, DG set is what supplements the supply should it be inadequate along with solar panel supply.



Consumption on campus:

Monthly consumption of units (for February 2020) = 1,228,980 + 950,520 + 37,949 = 2,217,449

(Significant variation across months, with average units consumed in winter months = x and those consumed in summer months = 1.7x)

Yearly electricity unit consumption = 35,500,000 units \approx 14,399.5

Say Watt?





Fuel Throttle

Emissions from the Vehicles:

There are about 550 cars, 230 motorcycles, 3 shuttle bus services and 4 vans owned by hospital and security that run inside the campus. But we have only estimated for those that are owned by IIT. Fuel use is given as:

For the bus: 57.67 litres diesel \equiv 0.15 tonnes of CO₂

For other vehicles: 812 litres diesel \equiv 2.14 tonnes of CO₂

Total emissions due to all college owned vehicles \equiv 2.29 tonnes of CO₂

Data on diesel consumption is collected from the DG set operation area with the help of Mr. Rajeesh, detailing the quantity of diesel utilised on a per hour basis, varying according to season and demand.

Total quantity of diesel used in a year = 14400 litres \equiv 38.7 tonnes of CO₂

Plus Aliquid

27 tonnes of paper was purchased during the last year. This accounts for A4 and A3 white and coloured paper used by the administration and departments. This figure does not include rolls of paper, journals and magazines also purchased by the institute.

The energy spent in manufacturing, transport and decomposition contributes significantly towards the total carbon footprint of the institute.

26.19 tonnes of paper \equiv 74.51 tonnes of CO₂
<Paper Calculator (www.papercalculator.org)>

During last year, 30,340,000 litres of water was consumed across the institutional area and hostels. This produced 12.51 tonnes of CO₂ emissions from the electricity used to supply the water, and treat the wastewater.

30,340,000 litres \equiv 12.51 tonnes of CO₂

Also, 253.5 tonnes of waste was collected from the waste generated from campus institutional area and hostels.

253.50 tonnes of waste \equiv 65.15 tonnes of CO₂



It all adds up!

14,592.57 tonnes of CO₂ is roughly equivalent to emissions from driving 12 million kilometers around the world 1200 times or CO₂ emissions from about 2400 households.

What we have not included in this study is the micro perspective, which includes every resident's travel, living and food patterns. Furthermore, only the data that could be procured has been collated, but a lot has been excluded because of limited scope.

The total emissions from different sources are as follows:

Electricity	14,399.5 tonnes of CO ₂
Diesel+Fossil Fuel	40.99 tonnes of CO ₂
Paper	74.51 tonnes of CO
Water	12.51 tonnes of CO ₂
Waste	65.15 tonnes of CO ₂
Total	14592.57 tonnes of CO ₂



Vision 20/20

In order to develop a greener, sustainable and a self-sufficient campus, the institute has recently adopted multiple measures.

Street lights are being renovated and the halogen lamps are being replaced with LED lamps.

The average energy saved per LED Lamp per day for an operation of 12 hours = 1.44 kWh, Reduction in the Carbon footprint = $0.82 \times 1.44 \equiv 1.2$ tonnes of CO₂

Old Air Conditioners have been supplanted by new energy efficient ACs consequently saving about 10.3 KWh of energy per AC per day for an operation of 10 hours.

Reduction in the carbon footprint = $0.82 \times 10.3 \equiv 8.5$ tonnes of CO₂

In addition, a 20 KW solar power system has been ordered and tender for another 1 MW has been issued.

The solar power plant generates 80 units for 300 days in a year.

No. of units generated per annum = $80 \times 300 = 24000$ KWh units

Reduction in Carbon footprint $\equiv 17$ tonnes of CO₂

Climate change is real and human activities are exacerbating it. It is the need of the hour to lead the change, set small short-term targets and hence achieve the ultimate goal of Net Zero Carbon Footprint or Carbon Neutrality.



DIFFERENTLY
T  BLED

ACT I

Bar, Poker Table No. 7

The Solitary Gambler; the stakes are high,
His mind and heart, true players;
He has his virtues and his monsters,
Muddling with love, happiness, worries and fears.
One man grows through the game of life,
His demons, like him, morphing continuously.

Beginning as the impressionable Soldier,
On the threshold of a future and no history.
Perceiving thoughts and things in ways yet a mystery.
The “unknown” to him arouses sensation,
He is yet to learn the fear of anticipation.

Soon ready to take on the world. The Believer;
Of heavens in the sky and the demons down under.
What he sees with his eyes and mind,
Of tales and fables, and victory and plunder.
The darkest dark and pixie dust, shooting stars and magic
burst.

And then he grows into the Rebel,
With anxious first steps and emotions overwhelmingly
strong.
The fear of disappointment and shattering expectations,
Clouding priorities, dreams, right and wrong.
Then a Soldier. Seeking guts, grit and glory,
Ready to thwart his monsters and pen down his story.

Thus he slips into the midlife crisis, the Seasoned Pawn.
Feeding judgements, superstitions, insecurities,
Full of wise saws and modern instances,
Drawing a line on what supposedly are his own possibilities.
And then he lies in retrospect, awaiting the inevitable.
The dawn long gone, darkness to stay.
Once shining eyes and youth and memories fade away.

And then the time finally comes.
That ends this strange struggle and speculation;
When he is at solace and drunk in oblivion.
On the threshold of the unknown yet again.
The game charts out
Of the regime, commander, slave, sinner;
And if it were to end tonight,
Would you call yourself a Winner?

Moving around the casino, looking for places to sit, the retired commander finally sat on a poker table with just one opponent. A foreigner, he seemed, and a man in his 40s. Peering into the blank wall with a blank face, he seemed impossible to read.

Commander: Hello sir. May I take the seat as your opponent, or are you waiting for your men?

Opponent: No sir, I am very much looking forward to an interesting company to play with, you sure look like one. Why don't you sit down?

The commander sat down with him and the game began. He was looking for signs on his opponent's face, trying hard to read him, but it was no good. He looked at his own cards, 'Well, it's not nothing', he thought to himself.

Commander: (jokingly) You look like a seasoned player. You have what we can call the classic 'poker face'.

Opponent: Seasoned, no sir, I am not seasoned. I'm just a man who does not like to show his emotions. It is either trouble or danger more often than not, don't you think?

Commander: (pausing) Emotions, yes, they can be dangerous, I can tell from experience. Did something happen to you too?

The commander places his first call, while trying to engage his opponent into a conversation.

Opponent: It did, though I'm very much interested to hear your story first, do you mind?

Commander: (laughing) Well it started when I was newly promoted as a military commander, I thought the world revolved around me. But so it felt, and so it seemed. With lots of new responsibilities and lots of new subordinates, I was at my happiest, until the call.

Opponent: (looking up from his cards) A call?

The opponent raised the stakes.

Commander : Yes, a call, that raised the stakes for me.

Opponent : What were the stakes?

Commander : My ideology, reputation, career. Wasn't it all that mattered back in those days?

The commander paused, and looked over his cards, contemplating whether to continue or not.

Opponent: What was the call about?

Commander: He called it a secret we share, the caller. But it was a blackmail, a threat to reveal something dear. He offered an out, and asked for legal status for the refugee community.

Opponent: Your turn to make the call then.

Commander: Indeed. But refugees aren't people I pity. They are like parasites, who cling to our cities and multiply. I ask, what good will these people do to a foreign land when they could not save their own.

Opponent: Weren't those secrets dear to you?

Commander: Aren't secrets dear to everyone? I put all my power to protect them. I had very loyal subordinates, I was a commander after all, and a loved one for that matter. I couldn't be tamed into giving up legal status to some foreign invaders. I was not to be bent.

Opponent: So what call did you make?

The commander paused and looked at his cards.

Commander: I refused to give up our country to these men.

The commander placed the call.

At this, three cards were revealed on the table. A seven of spades, a four of hearts and a seven of diamonds.

Opponent: So, what was the reveal?

The opponent raised the stakes once more.

The commander didn't say anything, but his eyes showed emotions ranging from rage to remorse.

Commander: (pausing) Do you remember what happened fifteen years ago?



ACT II

Bar, Poker Table No. 7

Opponent: Vividly so, sir.

Commander: So what's your story, young man?

Opponent: I am a traveler by nature, and in my voyages I meet several people. 15 years ago, I met a certain gentleman, and gentle was he. But due to several incidents off late, he was very, very angry.

Commander: (nodding) Those were hard times. What had happened?

Opponent: He was a refugee in your great country. The commander's eyes widened, he sat up.

Opponent: I was visiting a refugee camp to see the status of the people there, and that is where I met Alex.

The opponent was taken back to what it was like walking those miserable grounds. Walking around those tents, Alex was trying to find the medical unit. They had been there for five months, and no proper nursing unit was set up. He was carrying his badly wounded friend Paul around, looking for help. It was bad enough that the conditions at the camp were not hygienic at all, at least the people should have had basic medications available. Alex worried about Paul. He had been hurt badly and might not survive another week in that hellhole.

Alex recounted what happened that night. It was a starless night, as it had been ever since the war ended. Some days one couldn't even see the moon. The members of the squad were on patrol as usual, herding refugees like a flock of sheep. Just as Alex was about to call it a day and head back to his measly tent, the sound of a gunshot pierced through the void. Everything went still. Alex ran towards the source of the sound and saw a body lying there in a pool of blood.

“This is what happens when you forget your identity. Remember, just because we have let you cross the border, you shouldn't forget your boundaries. Always keep in mind that you are beggars living in a borrowed land”, a young officer was screaming at Paul who was barely conscious.

It's hard to imagine how Alex mustered the courage to remain still and quiet. Maybe the scars on his back, still raw from the whipping a few days back, held him from doing anything. Or maybe that energy was required to lift that strong built man and take him to the nursing quarters as after what the squad member said there was no one else to do this job.

As the opponent reached the nursing room, he saw Paul playing make-believe with a bunch of kids. Paul looked so innocent, unlike the bloodied man with anger and resent in his eyes. Alex signalled Paul to come aside and discussed the last part of their plan with him.

Commander: (places the call) Where were you lost suddenly?

Opponent: Sorry, nothing specific. Alex met an officer in the camp area where he took refuge. Contrary to what I hope for you, he was someone who estimated his moves wrongly, and not until the final reveal was he able to understand how he was being played.

The fourth card was revealed, a three of clubs.

Commander : Maybe the signs weren't as clear as your friend presumed.

Opponent : Maybe, but Alex had tipped the first tile of the domino when he sent a note, to which he got no reply.



"You intend to kill men
Men unheard unarmed
Devilry be your religion
Erstwhile don't be alarmed

Here two can keep a secret
Two can safely cross by
But no one keeps a secret
If the keeper tells a lie

Some dirty hands are sure to find
What you may run to hide
And then you will be unmasked
No more secrets to confide

You really got the big toys
You got big toys in the night
You keep away the big toys
But forget to paint them white

So black be your heart
And black will be exposed
And should you feed your heart anymore
Your morrow will be closed"

Commander: (sternly) Officers in this country get ransom notes like these every other day, and most of them are hoaxes and empty threats.

Opponent: (laughing) Don't get defensive sir! It isn't about you. Let us continue the game.

This time the commander raised the stakes.

Opponent: (curiously) I hope you didn't make such a decision in a fit. I thought you knew what emotions could do to a man. Would you like to complete your story?

Commander: (calmly now) No, go ahead. Your friend's story seems much more interesting.

Opponent: Alex called on the officer two days later, to substantiate the letter he sent. But the officer was arrogant and turned a deaf ear. He threatened to end Alex's community instead. The officer, like you said, took Alex to be just another empty threat, but he was not. So with all the resources he had, and all the resources he used, it was his own misjudgement that brought the officer to his doom.

Commander: Your friend sure seemed very sure of himself while committing a grave crime himself.

Opponent: (placing the call) I believe we all have our reasons.

Commander: And what was his reason?

Opponent: A better world.

The fifth card is revealed. It is the ace of spades.

ACT III

Bar, Poker Table No. 7

Both of them were now attentively looking at each other trying to find signs of who has the upper hand. But it was no good. The stakes were high, but so was the reward. It was the opponent's turn. He had two jacks, one of clubs and the other of diamond; this would leave him with two pairs at the end with a jack high, an uncommon hand. But, seeing the commander raise the stakes was giving him second thoughts. Although the commander did show a fit of temper, which helped the opponent make his decision.

Opponent: So tell me commander, won't you finish your story?

Commander: In the times I worked as an officer, each one of us had a file, maintained by our superior commander. As I got promoted, I was handed over my own previous file, a standard procedure. It gave us a clean slate. I figured if someone had to threaten me, it would have been over that file. It had the documented version of all my work life. As an officer, you are forced to various things for the betterment of the people. But the same people would never understand why we have to do these things. So they should best remain hidden.

Opponent: You did seem to have pretty high stakes. Could you save yourself?

The opponent raised the stakes to higher than what the commander had with him. For the commander, this meant he could lose everything he had with him, unless he folded, which could still leave him a little to go back home with.

Commander: I had a plan. The caller had given me a deadline, an ultimatum, after which he threatened to release the documents. But my documents were sealed, they weren't touched. So, if at all the threat was real, the caller would have to come for those documents. So I left the document as bait, waiting for him to strike.

The commander looked at his cards and then at his opponent, he was in a dilemma.

Opponent: Can't decide what to do? You could fold and save the little money left.

Commander: What would I do with this small amount of money? I gave it my all when the stakes were much more real, the threat could ruin my life. No, I am not one of those who gives up so easily. I had all my men look over that bait, we would have caught that bastard right when he thought he was winning.

Opponent: So did you?

The commander looked at the opponent as if to get one last clue, it was still no good.

Commander : Don't you think that your stakes are higher than mine?

Opponent: The bigger the gamble, the bigger the win.

Commander: Was it? Just a gamble?

Opponent: What does your experience tell you? Did your intuition lead you to the caller?

Commander: You know about it, don't you? You must know what happened.

Opponent: Doesn't everybody? It was a national scandal afterall.

The commander was taken aback. All the humiliation came back to him like a storm. Despite multiple pieces of advice from his subordinates, the commander had overlooked the fact that the documents could be something else entirely. For him, the world revolved around him, why else would the caller contact him of all people. He refused to work as a team, and chose to be a lone wolf instead, who followed a false scent too far to understand that he himself was a bait. It was a mistake that cost him his career. The actual threat was to reveal documents of war crimes his country committed, describing events that led many people to run away to take refuge in foreign lands. The threat was made by a victim of those crimes, who was just looking for proper shelter.

Opponent: Where were you lost suddenly?

The commander recollected his thoughts. He looked at his cards, a two and a five of hearts. His cards combined with that at the table would have given him a straight with an ace high, a hand so rare, he had seen it only once before in an old game. He looked at his opponent looking straight back at him. It didn't seem possible that his opponent had a better hand.

Commander: You didn't say, your friend, was he able to make a better world for his people?

Opponent: He did. The officer, due to his negligence of a real threat, had to resign from office. And because of the leverage he held, he was able to secure a proper place for living in the country. Few years down the line, they even got citizenship.

Commander: So it worked out?

Opponent: It did. Call it a blessing in disguise. Someone's arrogance led to something good in this world, purely by chance.

Commander: Well that chance didn't work out for me!

Opponent: And is that chance working out now?

Commander: (looking at his cards again) Probably.

Opponent: And if all this were to end tonight, would you really call yourself a winner?

The commander went mute for a while. He looked at his opponent, as if he was finally looking at him for the first time, for what he really was. For a minute, they both sat in silence, looking at the cards, the money on the table and each other. Then the commander got up.

Commander: Well, it was a nice game. I have decided to fold.

The opponent, for the first time tonight, was not anticipating this move, and was taken aback! He too got up.

Opponent: (struggling with his words) Bu... But, why did you fold?

Commander: Because sometimes, it's better to lose. For the greater good, you know.

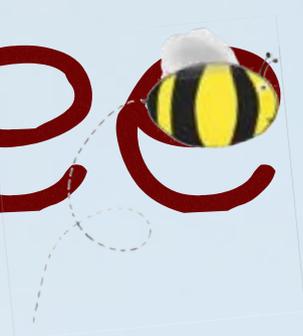
The commander said and winked, almost amicably.

Commander: Anyways, it was a pleasure playing with you. It'll be a shame if I don't even know who I was playing with.

Opponent: Alexander Baldwin sir. My friends sometimes call me Alex.

Both gentlemen smiled.

Bee You!



What best describes you making friends new?

- a. I add new ones without any ado!
- b. I keep few close but I'm my beest friend.
- c. Bees may come and go but my hive together till the end!



What is your typical work prep strategy?

- a. It's all a joy ride, it's all to me glee!
- b. My ambeention and planning is chalked for success.
- c. I epitomise dedication (and sometimes stress).

Challenges and obstacles, how do you perceive?

- a. They are stepping stones towards goal, I believe
- b. Insectional with triumphs, any life they necessarily constitute
- c. Perseverant striving till I buzz them off is my attitude



How would you like to spend your free time?

- a. Playing outdoors and/or lazing around is prime
- b. I don't keep free, to books I employ
- c. Singing and/or dancing is what I enjoy

What to you is the end of a chapter?

- a. I await and relish the happbeely ever after
- b. I beesy myself to write in a new one
- c. I look beehind to draw hope and expectation



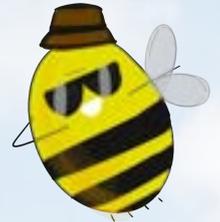


If you had mostly a's, oh honey, you're a Drone!

Bee moments good or bad, you inject fun and hilarity of your own.

With its ups and downs, your life is sure to bee bomb,

So go ahead and bee the star of your sitcom!



If mostly b's be you, then My Highness, you're the Queen!

You'll get respect and affection wherever you would've been,

Sociable + responsible, you're loved + trusted around to bee,

Just fly for the star and go down as history!

And if you had mostly c's, beehold my dear, you're the Worker bee!

You work hard, and party harder, you ball of positivity!

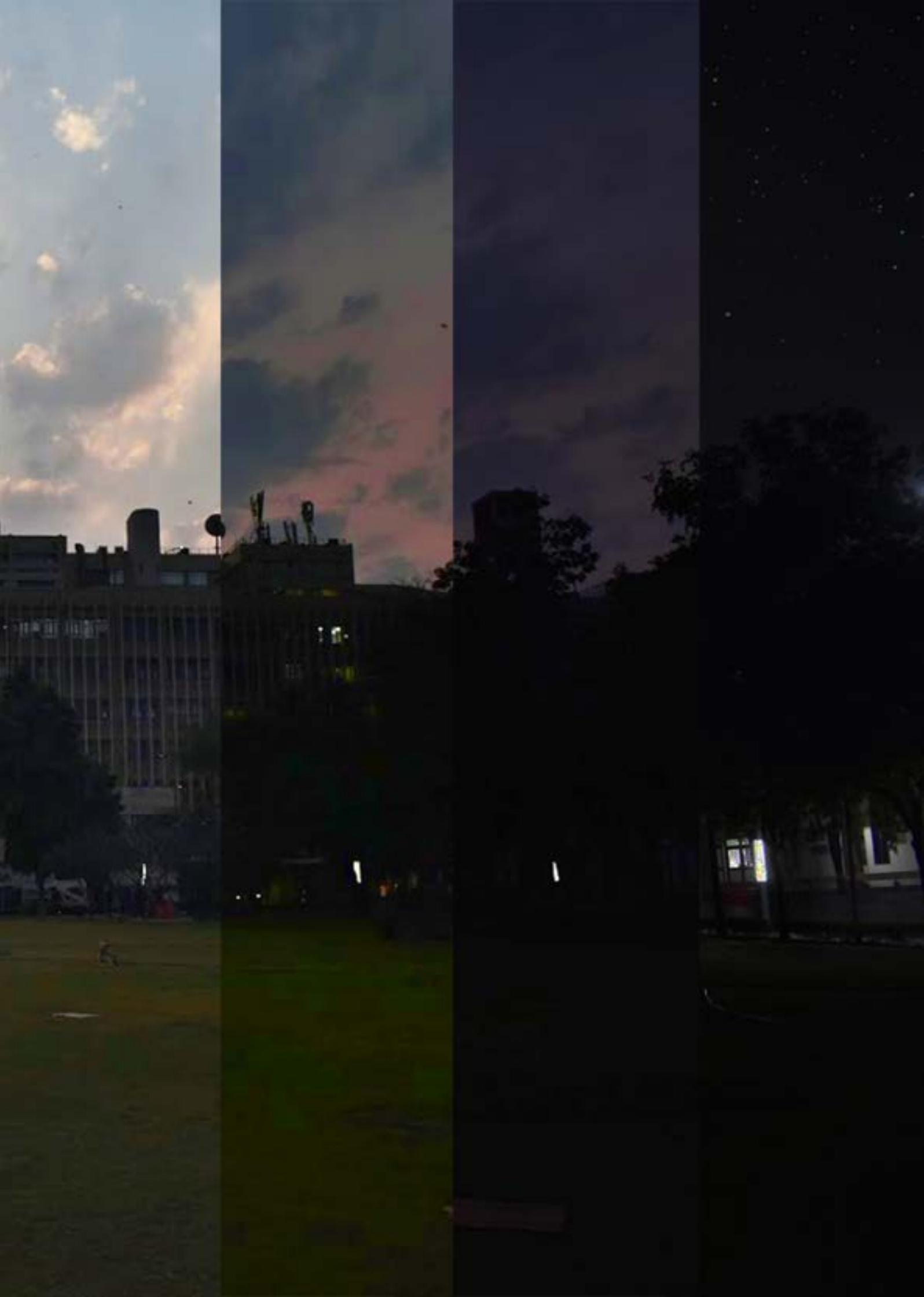
You're beelightfully loveable, and your work embeellishes perfection,

You're destined to ace the pinnacle and shine brighter than the Sun!



Embrace your inner beeing





ALL GOOD THINGS MUST SUM TO AN END