

BYTSCRIBE

THE ANNUAL MAGAZINE OF
COMPUTER SCIENCE AND ENGINEERING
NIT SILCHAR

THEME —

TECH GEEK'S
GUIDE TO THE GALAXY



INTERN DAIRIES

ALUMNI SPEAK

A YEAR IN REVIEW

Message from Convener



The Computer Science Society has done a wonderful job organizing various events and activities beneficial for CSE as well as students of all branches. The regular activities undertaken by the society are indispensable to the students of the department. Publication of the magazine, BitScribe, is a proud moment for all CSEians and it portrays the efforts of the CSS members as well the contributors perfectly.

I would like to encourage continuous participation and ask the students to be reliant on the CSE community for it to grow and help the future batches as well. I wish the students best of luck for all their future endeavors.

Mr.Badal Soni
Convener, CSS

MESSAGES



Message From President, CSS



I feel privileged to have the opportunity to represent Computer Science Society which is one of the most active society in this college. Ever since its establishment, the society has been working hard to provide students of CSE branch, as well as, other branches with ample opportunities to improve their technical and soft skills. With this edition of Bitscribe, I would like to thank all the CSEians for their contribution towards the upliftment of the branch. As the saying goes “United we stand, Divided we fall”, I would like to urge every CSEian to keep supporting CSS in future because without your support, CSS can never achieve its targets.

Darpan Jyoti Bora
President,
CSS 2018-2019

Message From General Secretary, CSS

It is an honour and a privilege to be able serve as the General Secretary of Computer Science Society for the term 2018-19. I would like to express my gratitude to all my senior alumni members for laying down the foundation for this society and giving it such a powerful meaning and prospect. We as a society aim to solidify the sense of unity and diversity within this amazing group of people. I would like to congratulate to all my fellow batchmates as well as juniors for making this branch the best among all and would also ask you all to extend your support towards the society to help this branch achieve newer heights. Lastly guys remember Sky isn't the limit.

Nishank Das
Secretary, CSS (2018-2019)



**Rohit Upadhyay**

Message from Technical head, CSS

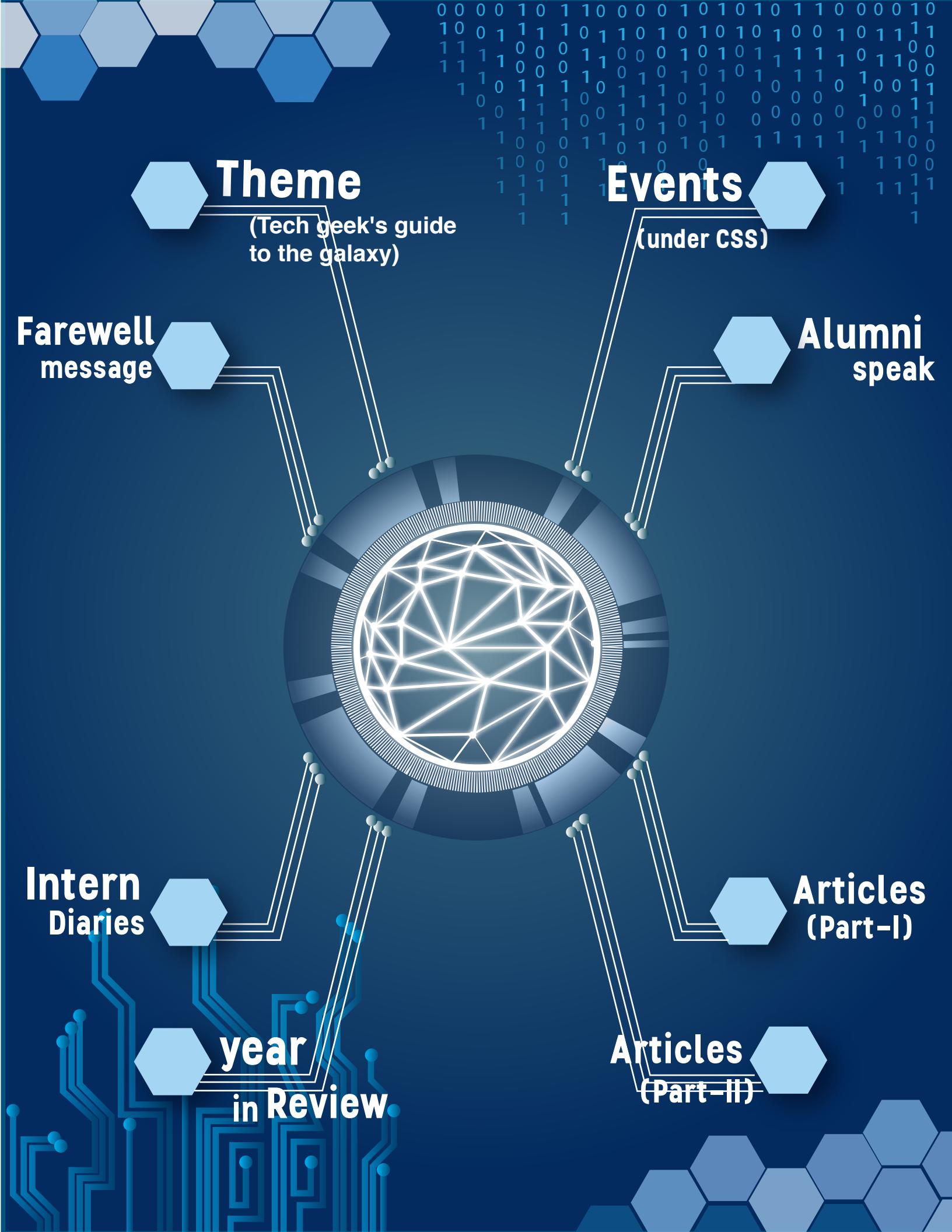
It is my distinct honour and privilege to serve the Computer Science Society as its 2018-2019 Technical Head. I would like to express my sincere gratitude to the past members of the Society for their unconditional dedication and commendable achievements throughout their tenure that has lifted the Society to its current stature. Being volunteer led and volunteer driven, the success of the Society depends on the dedication of the individuals like you to share their time, talents and energy to make the CSS a premier organization that encourages and pushes forward the field of Computer Science to newer heights. Hence, I welcome you to a new chapter in the exciting and eventful story of the Computer Science Society, NIT Silchar.

Message from Coding Club head

Coding Club has been an integral part of all those who have been a part of it. It was an initiative taken by our seniors to create a learning environment amongst the students by bringing together a group of programming enthusiasts. The ultimate motto of the club is 'Anyone can code'. The emphasis of Coding Club is on developing life-long skills in a supportive environment, so that students can learn something beyond their regular academics.

#happyCoding

**Harsh Agarwal**



About The Theme

Tech geek's guide to the galaxy is the essential source of information and ideas that make sense of a world in constant transformation. This BitScribe conversation illuminates how technology is changing every aspect of our lives — from culture to business, science to design. The breakthroughs and innovations that we uncover lead to new ways of thinking, new connections, and new industries. We explore the vast yet bound system of tech with the vortex being our college and represent our student's ideas through essays, features and reviews. With a lucid filter to the overwhelming flood of information about technology, we hope that we've done our best to present CSE's very own magazine, BitScribe in it's 2018-19 edition.

Events Under CSS

ORIENTATION

Basically, we all are pretty aware of its significance and how it benefits the freshmen to gain an understanding of what is expected of them, demonstrating them that the society is sensitive to the needs of them, which can lead to a greater level of comfort. It usually lasts just a few hours, but it's an integral part of the weeks- or months-long onboarding program. So, it's been organised every year by the Computer Science Society, to introduce each new member of the CSE family to the current working members of the society and the list of activities they'll cross in their journey throughout the year.



ESPERANZA

Hey there, get ready, it's the Freshers, it's the Esperanza! The event that excites every first-year guy and girl, which not only build their confidence but also add creativity to their levels. The main aim of this party is to give a warm welcome to the new comers. It is accompanied with so many colourful events and programs like ramp walk, traditional, fusion, and western dances, exhilarating singing performances, and splendid decoration, thus making it a soulful evening. A little music, new faces, smiles all along, clamouring for the party time! Now another batch of freshers and Esperanza will be just round the corner, bringing together the family and a night to remember.

JAVA TRAINING

Programming languages, that every CSE student is expected to learn, that almost everyone expects from them, from their own colleagues to the Job offers. Hence, the CSS tried to help many of our juniors as well as the senior students to learn the basics of Java (one of the most useful programming languages) and clear their doubts regarding it, by conducting the Java and Android certified course classes held by CETPA Infotech, IT Training Company. And the CSS generally conducts few such kinds of programs every year to help every student.



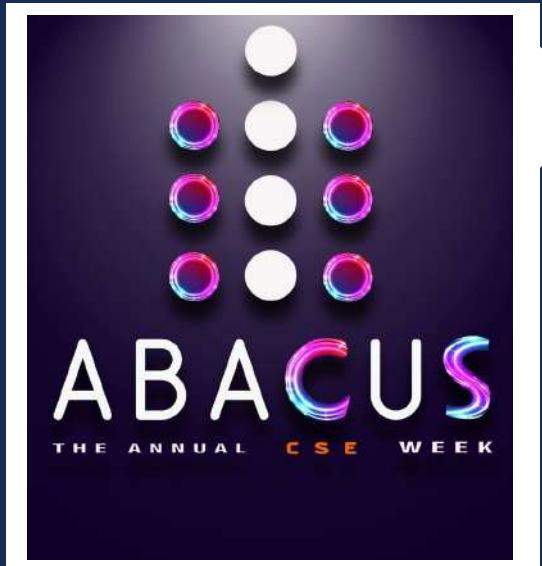
C CLASSES

The first initiative, taken by the CSS during the session of 2017-18, was organising the C classes for the first-year students. It was the first of its kind in the campus, and was conducted with such great efficiency, implementing everything with proper timings and procedure. It was, probably the best way of introducing the freshmen (especially those who never did any sort of coding) to the world of programming. Even the classes were divided in two sections, one for the very beginners and the other one for those who did practise it before, so as to make it easy for everyone to learn according to their needs.



ABACUS

"The annual Computer Science and Engineering week - Abacus, is right around the corner." Yeah, this is how the excitement begins each year, for the Annual week of the CSE dept. in which different games and competitions takes place where everyone gets a cool opportunity to prove their skills down and claim the prize money. But the most unique point about it is that it gives you, the freshers, the opportunity to become organizers, to present your ideas, instead of just participating and enables you to learn numerous things.



FAREWELL

Some day and at some time, we need to bid farewell to the special and loving ones in our life. Our senior friends, although not blood-related, are special people in our lives and bidding farewell might be a painful moment as we will be missing them, the ones who remained a part of our journey as we continue grow with our college life. As they need to say goodbye, we make it worth remembering for them by bidding them some encouraging farewell messages and memories through the farewell event, which is conducted at the end of every year session.





Hello my dearest juniors

First of all, I would love to take this opportunity to welcome all the 1st year students to NITS as well as to the most charming and wonderful family here - The CSE family. This family gave me everything that I have today and has supported me all along. You could find the most supportive seniors as well as wonderful juniors to help along.

Take it from me, four years of college pass by so quickly and NITS offers you plenty of opportunities and I implore you to explore them and bring the best in you. Remember to take up every challenge head on, enjoy every moment to the fullest and most importantly, never stop learning. All the best.

FAREWELL MESSAGES

Ronit Kumar
Batch of 2018

THE FOUR YEARS A glimpse...



That day is still fresh on my mind, like it was just yesterday. The first time I saw the little board that said "National Institute of Technology, Silchar" and the first time I entered the beautiful campus. A lost soul who had no idea about what the 4 years had in store for me. It was such a beautiful feeling. Meeting people from all over the country, getting to know their way of life, choosing some friends for your inner circle, choosing a family away from home, falling down hard but then again getting up with your head held high, smiling and crying etc etc. Somehow these 4 years have been a complete life cycle for me. Starting young and fresh in the first year, filled with all the enthusiasm and the urge to prove oneself and the urge to leave a mark. Exploring all the unexplored paths, doing things you could have never thought of doing before, trusting people you should have never trusted, making some special bonds, flunking the exams, making some first trips, letting people make a fool out of you - this is what first year has been for most of us. The best year, the time when we were allowed to make mistakes or rather we were supposed to make mistakes. I still remember the words of those wise seniors - "You'll wish for the first year days to come back to you once you become a senior." True they were. But nevertheless, Second year had a lot in store too. Becoming seniors is a strange feeling. You feel like the boss of the college and no one is going to stop you. Second year is the year of learning lessons. Its the year you figure out who your real friends are. It is the year of enjoying your new found freedom as a senior. Also a year to build yourself personally. You figure out a lot of things about yourself and what you really want to be. You see a lot of changes in yourself and around yourself. It is one of the most crucial yet one of the most chilled out year of engineering life. Also there is a craving within you to build yourself up in order to stand out from the rest of the crowd. With this confusion about yourself in your mind, you reach your third year - THE toughest year of an engineer's life. This is that time of the four years when you become serious about your career path and you realize how you have been ignoring the main motive of you coming to this college - YOUR CAREER. And that is when you join the competition of getting your academic scores high with full force. It is then you realize how much you have been lagging behind from the rest of the crowd. You feel really useless when you get to know about your position in the crowd and there is a lot of realizations during this time.

But somehow there is a motivation inside you to prove yourself. You do manage to pull yourself through the year and you manage to do moderately well. With an average CGPA and an average internship that you worked so hard to get, you finish your third year. With all sorts of dreams and aspiration, you have reached the final destination that is the FOURTH year. Fourth year is that year of your life which will make you go through a rollercoaster ride of mental and physical stress. While you will see people around you moving ahead in their career path, you might end up depressed thinking how your hard work isn't paying off. But then your day comes too. Maybe a little late, but you do get to live those joyous moments too. The rest of fourth year goes by reminiscing the past days - how young and free we used to be. At the same time there is a constant fear of going away from the safe walls of college to the strange world filled with strange people. Then there are the emotional breakdowns about leaving the family behind, the one you made in this place. The thought of not getting to walk in those lanes by the lake, not getting to see the open sky filled with stars

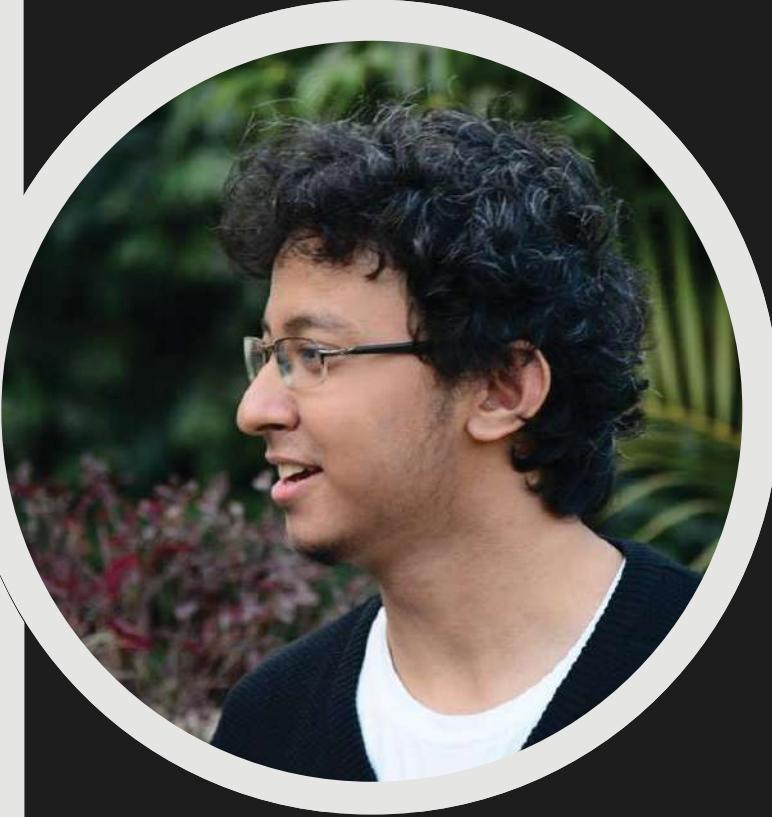
and not getting to meet the people with whom you have spent 4 years - it is heartbreaking. But yes, life goes on. And we have to move on too.

And that's how the four years just fly away. These years have definitely been the best ones ever. If only they could come back to us? I could give anything to just have that one cup of coffee at midnight in the hostel and have those late night conversations which would turn into morning strolls around the campus, sit in the football ground and stare at the starry sky, sit by the lake and just forget the world, dance all night long during the fests, make innumerable trips to the town and come back after in-time and somehow sneak in. I COULD TRADE IN ANYTHING TO JUST LIVE THAT LIFE ONCE AGAIN. IF I COULD. IF ONLY...

Priya Jain
Batch of 2018



Last time i saw NIT Silchar was probably about 2 months ago. All of us looking like a bunch of oranges, I guess. I must admit, the day of the convocation didn't trigger much memories but if I take some time and think about the college days, I must say it makes me smile. This article is gonna be about a few things I'd like to share with you all. To begin with is when your family drops you to college in your very first semester. You are excited but also scared as for most of us, its our first time on our own. The first step towards being a tiny adult. 1st year you've got to attend all the meetings the bhaiyas and didis conduct. Soon you find out about a ton of things from respecting seniors, pointers, the lab records (no one forgets mechanical workshop), the campus, the mess food, the many different societies, a thing or two about placements and a ton of other things including some I can't write about as well :P Out of all these things, what you take interest in your initial year at college could determine how the 4 years of college would go, in fact sometimes they might determine how your life will go as well. Soon will come second year, where you are excited to meet your department teachers, and yeah, you meet them :P. Boys are now officially juniors in their hostels and are forced to participate in parades but at the same time the batch is excited as now they have a bunch who'd call them bhaiyas and didis. But on a serious note, from my experience this probably is the last time because a student from CSE



has to start working for an amazing placement to bag by end of the 4th year. After the 3rd semester ends, it might get a bit difficult. Third year comes which will be the most hectic year of as you'll need to manage your academic studies, placement studies, social life, personal life and look for internships as well. But trust me, things will turn out great. 4th year you see how the paths people chose in their initial days here will affect them, although with a few exceptions as well. By the end when you are satisfied with the goals you have achieved here, remember to enjoy the last few days but keep in mind that an entire life lies ahead of you. This phase was just the start, say a demo to prep you up for the real life. All in all, college seems like the place which brought me up, helped me understand the world and

with all its magic and might, gave me a tiny bit of every emotion I could experience in the real world. Taught me about things which are important, which are not. One thing not everyone is taught is about how a dangerous disaster can strike you at any point of time without any warning. I was a lucky one to have had such an experience in my 5th sem, a tinyone although. I was diagnosed with ulcerative colitis. But it taught me that I should be prepared for any kind of emergency in life. And the same is my advice to anyone reading this article. So a happy 4 years to you all. Remember to enjoy a lot in these four years but also learn to be a better version of yourself in each passing day.

PS- *Stay away from college politics.
Those will ruin precious time of your life.*



Nitish Kashyap
Batch of 2018



Welcome juniors to the CSE family and THE coolest branch of NITS.

You must all have heard that college days are the best days of your lives and honestly they are. I can definitely vouch for it. I cannot put it down to a single reason but it's the little things you experience which you will cherish for the rest of your lives. If I talk about CSE, all I want to say is that you guys are in here for a treat. You will probably enjoy the most here not only in your hostels, in your class, in your labs and in your coding clubs where you will have a lot of opportunity to explore a lot of new and cool technological stuff. The best advice I could give you is to grab those learning opportunities. For first year guys, I want to say you should always feel proud to be in CSE family not only because you are in the best branch of NIT Silchar, but because we people have good coding environment. Your seniors will help you every time and they will be there to teach you every step of the way.

One of the additional benefits is that you will have a lot of opportunities to take parties from your seniors. Be persistent and persuasive :P. For fourth year guys, in these 4 years, each day begins with a new challenge and presents you a different lesson. You guys have endured hardships in the past three years to reach where you have now. So, party hard because a new phase of life is waiting for you and take it from me, it's not as flattering as your college days. From freshers to farewell, time flies like a dream so savour those precious moments. For second and third year guys, enjoy your days and also explore new things. If you need any help from your seniors, just ask.

Tips for 1st year: Interact with your seniors. They can guide you the best.

CSE Rocks!

**Udit Varshney
Batch of 2018**

It seems like just the other day. I set foot into NIT to embark upon a new journey, absolutely unsure of what my immediate life had in store for me. Unfamiliar faces everywhere. A new, exciting (or unexciting) phase of life depends on what you make of it. Gradually, days passed into months, months into years. The once fresher me reached through, to the final year and phew, Graduated too! Everything seemed to fly by, at the wink of an eye. But time has stood testimony to some of the greatest times my life could ever have discovered, for which I shall forever be indebted to NIT Silchar. NIT Silchar is not just any other random engineering campus

for me, it's an emotion. From teaching me the ABCs of engineering to life-hacks for facing and surviving, today, I can proudly, confidently make my step ahead. To all freshmen who just entered, remember, your life in engineering is just what you want to make out of it. It's not about studies alone. Learn Life. Get the best out of you. Involve proactively in activities around.

Interact with people especially seniors. Be wise enough to make good, new friends. Travel with friends. Go out partying. Enjoy these days. For, once you begin realizing its worth, you'd already have reached the end of it.

Chinmoy Shekhar Das
Batch of 2018



ALUMNI SPEAK



Hi you all super awesome juniors,

Hoping you all are having a great time in college. If not, make sure to do have one. Like all the times, make these times another memorable journey of yours.

It has been more than a year after graduating from college, and I don't want to spend this time talking about which technologies you should learn and which domains one needs to focus on. The former one is something I might have a different answer for, the next time we meet, and regarding the latter, well, every domain is just as interesting as the other one.

So, I decided to write here something a bit different. I remember just another day from my sixth semester in college. Drizzling like always, it was! A perfect moment to thoroughly ask myself a question quite honestly for the first time. That what did I learn today! What did I do to be a better version of myself. All credits to some amazing friends! I had nothing that I could tag as "the thing" I did that made me better that day. But, excuses are always there, right? So, I convinced myself that I was busy with so many activi-

-ties and that's why I couldn't learn something new. I then decided to look at the previous week, and then the previous month and the previous year. No wonder I had a hard time figuring out what did I really learn or work upon in an entire year, to be better. 12 months, 52 weeks, 365 days!

And that's something I want you to think for yourself. What did you do? We all are so good at making super amazing to-do lists. Alas, they rarely get ticked off.

Reason? Well, that's something we all know! We hardly spend any time to improve ourselves. On a daily basis! Make no mistakes though. When I say getting better, I am not limiting myself to learning that crazy technology, or doing some course of computer science. I mean everything! I also mean the trip that's still there on our to-do list, and that novel we want to read so much, and that performance we so much wanted to do!

As I speak about all this philosophy, I also want to add that it's an ongoing process. I'm myself learning everyday about how can I better spend my time to do things I want to do, amongst all the time that goes away doing the mundane work, or simply doing "urgent work".

It's super amazing if you already spend a lot of time doing things you want to do, the ones to improve yourselves, and not just spending time in classes, assignments, and tests! If not, take a pen and a paper, and list down. What did you do yesterday to be a better version of yourself? And even more importantly, what will you do today? Because whatever happens tomorrow, we have today :)

Let's all reach out for the stars and the galaxy! :)

Cheers,

Ashwani Pandey
Batch of 2017

INTERN DIARIES

Wipro

Internship – a dreaded word which every engineer encounters while entering their 3rd year of study. The pressure to secure a good internship for CV points has every student applying to various companies of their domain of interest.

I completed my summer internship at Wipro Ltd., Bangalore. The projects were allotted to us on a random basis and I got a ‘Credit Card Fraud Detection using Deep Learning’ project to be completed within 8 weeks. In simple words, our team had to develop a web application which could predict whether a given credit card transaction is fraudulent



or not with an accuracy over 99%. My work was based mostly on the Flask framework and designing the frontend part of our application. With the support of an excellent team and under the guidance of our tech lead and mentor, we were able to complete the project in the stipulated time.

Working in a corporate is a truly unique experience. Having lunch besides people who had spent more than 15 years in the company and talking to them made for some amazing moments. The free tea/coffee, subsidized lunch and Bangalore’s climate were icing on the cake. Overall, it was an amazing experience.

Praneet Kumar

Indian Institute of Technology(IIT) Guwahati



Internship at - IIT Guwahati
Duration - 15th May to 10 July 2018

Experience - My internship was on the field of Advanced Data Structures and Algorithms under the guidance of Dr Pinaki Mitra as my mentor at IIT Guwahati. The first day at internship started with some introduction and then I was assigned with my task. Books from all subjects were lying randomly all over his place. One by one he opened some random books, kept staring at me for a while and then resumed his reading. I felt nervous seeing him. He then asked me my interest and explained my project which was basically on the uses of appropriate Data Structures on Dynamic Environment and their Optimisation.

I also learnt a lot of Advanced Data Structures thoroughly , their uses and implementation with code. Some of them were SkipLists, hash table combined B-trees, hash table combined Avl Trees, quad trees, range trees, k-d trees etc. All this couldn't have been done without Dr Pinaki Sir's guidance. He seemed very dedicated and well knowledged of his work. Overall the internship was fun.

Mriganga Deka
BTech 4th Year CSE

Scrutinizing Microsoft as a MACH Summer Intern



Unbelievable

In one word, that's what my summer spent at Microsoft was.

Last summer, I had the opportunity to work for MICROSOFT in Mumbai doing the MACH (Microsoft Academy of College Hires) program.

Let me just start off by saying that I am not the most outgoing person. Many personality tests would classify me as an introvert, so I found it hard and awkward to interact with new people.

Microsoft is great at opening doors for interns. Literally, I managed to book meetings with some hard to reach people, got to attend Q&A sessions with the top executives, and was never really told 'NO'. There was a great social group for interns, where full time employees would take out time out of their lives to hang out with us doing fun events. There was also an amazing program where every intern was matched with a full-time employee every week to chat and network. It showed that we were valued as interns and that people at MICROSOFT invested in our success and excitement. Within a span of two months,

I got way ahead in networking which is a feat in itself because of how reclusive I am, but it pushed me to be more social. I grew so much technically, but this internship helped me grow as a person, and I think that the experience of interning at MICROSOFT is priceless.

Kamlesh Biswal

Mentor Graphics®



When I came in the third year I wished to do an industrial internship to gain hands-on experience of what I had learned during the college years. While exploring options through various intern sites such as Internshala, AngelList, LinkedIn and online portals of the various companies, I came across an email Id provided on the website of Mentor Graphics, Noida. I applied through it. Based on my resume and previous internship experience, I was shortlisted for the internship.

When I accepted the offer, I didn't have the faintest idea of how the professional world works but definitely desired to discover it. I soon realized that the internship is not going to be a cakewalk. On the first day of my internship, I met my team members and my project guide. I was also assigned the task I had to complete in the duration of two months and the perks of flexible working hours, friendly colleagues and the scrumptious food. The industry has two crucial facets- the work of the company and the other is the professionals working for the company.

The first dimension indicated that what we learn in college and how the professionals work is absolutely aloof. Apart from focusing on theory and making the code run functionally correct with minimum time complexity, the focus is also required on aspects such as memory management, debugability and readability of a particular application. It is required to have a more depth understanding and practical knowledge of the subjects taught. While 2 months is always a short period to contribute at a deeper level to any MNC but my project guide ensured that the small duration would become a major learning experience along with being the most cherishing one for me. Being highly knowledgeable, he ensured to give me a practical insight into what I was doing.

The second facet provides the perception of how to deal with different kinds of people, professionally. It helped me to hone my communication and presentation skills. Since the industry has long-term projects, patience, willingness to explore new domains, positive attitude and self-motivation are essentials to succeed.

It's said people never learn by being told, they have to find it out themselves. This was definitely how this experience turned out to be for me. It proved phenomenal to discover my abilities and my interests. It molded me into a better person professionally. The summer proved to be a lifetime experience and surely one of the best I ever had. It not only imparted knowledge but also helped instill confidence in my capabilities despite failures and to pursue my eagerness and never stop learning.

Prachi Mathur

Internship experience



Goldman Sachs

Starting from the first week, where we were kept at hotel Hilton to the mid term outings (Community Team Works as they call it) and the last week presentation, it was a roller coaster of a ride. The first week when we started, we had no clue about what we will be doing and on what people we will be working with. We were eventually introduced to the project we will be working on and also with the team, who told us to enjoy the first week and we can start the work from the next week (at least my manager told me so, not sure about the other teams :p).

The learning curve at GS was exponential as they focused not only on the technical, but other aspects of learning as well. The people although busy with their work all the time always used to find time for helping others and for the necessary fun as well. Although, it was for a short stay, but was one hell of an experience.

HARSH AGRAWAL

A YEAR IN REVIEW

1

Meltdown and Spectre Exploits Bring Hardware Security to the Fore



2018 drew attention to the fact that information security is very focused on operating systems, applications and users, while physical and hardware security is often ignored.

In January, security researchers made it known that there were two major vulnerabilities lurking in microprocessors located on nearly all modern computer devices. The vulnerabilities, which came to be known as Meltdown and Spectre, could effectively be exploited by hackers to steal data processed on the compromised machine.

Companies scrambled to release patches for the exploits, some of which had significant impacts on performance, and continued to release patches to ensure security without the performance hit. Perhaps more significant, however, is that the discovery of the exploits will have a long-lasting impact on how we view cybersecurity, drawing more attention to hardware security.

General Data Protection Regulation (GDPR)

GDPR was one of the most famous — and infamous — acronym of 2018. Everybody in tech, for good or for bad, heard about it, worked on implementing it, or researched its legislative and regulatory implications around the world.

GDPR stands for General Data Protection Regulation, a new policy entered into force in the European Union at the end of May. GDPR had — and still has — a significant effect on how Internet businesses

2



operate in Europe, no matter if they are big or small, located or not, operating within the borders of the EU or not. “The new European rules are not perfect — they include the so-called right to be forgotten, which allows people to ask companies to delete personal information that they no longer wish to share,” the WIRED editorial read.

“But the Europeans have made progress toward addressing some of the problems that have recently been highlighted in the United States.”

GDPR rules were even mentioned during many tech hearings on Capitol Hill in Washington DC, including the hearing with Mark Zuckerberg of Facebook. The note includes talking points on a plethora of topics and issues, including Russian interference and election integrity, diversity, competition, and privacy... And even Facebook's reaction to comments by Apple's Tim Cook on the company business model and leadership. In the notes, when it comes to privacy, the new European GDPR regulation is quite prominent. The notes advise Zuckerberg: "don't say we already do what GDPR requires."

3

5G walking the mile from hype to reality

5G, the next iteration of mobile networks, which promises to be faster and more reliable than its predecessors, rode a tsunami of hype into reality this year.

"The technology will not replace existing wireless networks, but work with them, combining the benefits of 2G, 3G, 4G/LTE, wired technology and Wi-Fi into one platform that provides density, high speeds and reliable connections at low power," BizTech reports.



As emerging technologies like artificial intelligence, edge computing and the Internet of Things take hold everywhere, 5G can offer the advancements necessary to truly take advantage of them, bolstering data transfer speeds, reliability and more. This year might have seen the launch of 5G, but it's likely 2019 will be the year businesses truly begin to see it take hold.

Microsoft Needs You to Know It's Time to Upgrade

4



Still on Windows 7? It's time to seriously consider making a change, because by Jan. 14, 2020, you'll have to. This is the date that Microsoft will stop providing technical assistance, security patches and automatic updates to your product. While this might not be a "moment," so to speak — the end of support for Windows 7 was actually announced a few years ago — Microsoft made it clear this year that it would also be ending support for Windows 7 PCs with older processors. Microsoft also announced this year that as SQL Server 2008 approaches its end of life (July 9, 2019), along with Windows Server 2008 (Jan. 14, 2020), the company will be offering free extended security upgrades to those who choose to migrate to the Azure cloud.

Microsoft kicked up its messaging this year to ensure its customers know end of life for these older systems is coming. It's time to upgrade if you haven't already.

FAKE NEWS

While the term Fake News was one of the most popular of 2018, this year's Word of the Year according to Dictionary.com was:

Misinformation.

The rampant spread of misinformation posed new challenges for navigating life in 2018. The question about the nature of fake news came about many times this past year. And because fake news are strongly related to our activity as users on social media, the way platforms react and counter the phenomenon is key to understand it better.

Facebook, in fact, acknowledges that “the majority of false news that we see on social media tends to come from spammers and financially motivated actors.”

“What we do is that, if people flag content, as being false, or if our technology, or if comments and other signals, detect that content might be false, then we send it to these fact-checking organizations.”, said Monika Bickert, Head of Global Policy Management at Facebook

The fact-checking organizations with which Facebook works were mentioned earlier in the hearing. They include Associated Press (AP), PolitiFact, The Weekly Standard, FactCheck.org, and Snopes.

6

“Fake news is a term used to define a spectrum of content,” she answered. “On one end of the spectrum, we have malicious, deceptive content that is often spread by troll farms. That content would violate our policies and we would act quickly to remove the content and/or the accounts that are spreading it. In the middle, you have misinformation that may be low quality. This is where our algorithm kicks in to promote more authoritative content and demote lower quality content. And then, of course, you’ve also heard the term referred to mainstream media, in which case we do nothing. We don’t embrace the term in that context.”, said Google’s Juniper Downs, Global Head of Public Policy.

Open Data Gets a Boost

Data is everywhere. We all have it — tons of it! But are we using it appropriately? Probably not, because most companies can only see a small piece of the puzzle, not the whole picture.

To encourage the kind of data sharing that can help companies fill in the blanks, Microsoft announced at its Microsoft Ignite 2018 conference in October its Open Data Initiative with long-standing partners Adobe and SAP.

This move seeks to help companies share data in the cloud via a “common approach and set of resources for customers” that will ultimately create a “single view of the customer.” If it works, ODI could set the precedent for a world where data isn’t just gathered, but shared and levied to its fullest extent.



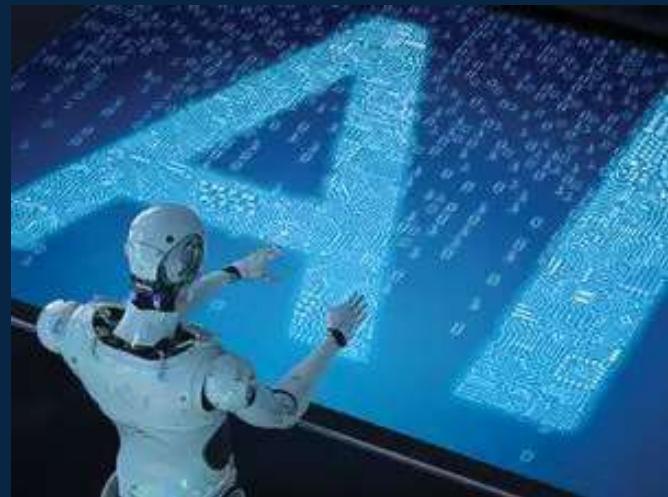
7

Artificial intelligence and machine learning represent one of the most exciting trends in technology: virtual assistants, autonomous cars, self-learning algorithms. These are challenges many tech companies and startups are looking at to push innovation forward. But the number of AI critics is multiplying as these technologies have also a dark side. 2018 has been a key year for artificial intelligence as concerns about the repercussions of AI on society and human activity are mounting, even within Big Tech. Trust is also a big issue as some believe that the recent rush towards AI may suggest that we are turning over the keys of reason to machines. However, companies like Google, Microsoft, and Amazon are now exploring ways to tap into AI for social good and humanitarian projects and aid.

Google was the latest to enter this space of what some refers to as AI for good. The company announced in November its AI Impact Challenge to grant about \$25 million globally in 2019 to humanitarian and environmental projects seeking to use artificial intelligence to speed up and grow their efforts. Earlier this year, following a harsh and public employee backlash, Google announced that it would not renew a deal to analyze US military drone footage in a AI-based program.

Microsoft, on the other hand, just silently announced that it would sell the US military and intelligence agencies whatever advanced technologies they needed “to build a strong defense,” including its machine learning and AI tools. We want the people of this country and especially the people who serve this country to know that

AI for Good



we at Microsoft have their backs,” wrote Brad Smith, Microsoft President, in a blog post. The counter the mounting criticism, Microsoft has recently launched a series of new AI programs, totaling \$115 million, including AI for Earth, its new project to put AI to work for the future of our planet“, and AI for Humanitarian Action, a new \$40 million, five-year program to harness the power of AI to focus on four priorities — helping the world recover from disasters, addressing the needs of children, protecting refugees and displaced people, and promoting respect for human rights.

BLACK & WHITE

My name is Rafiq. I work at the nearby construction site. It's good that the Government has started this 100-day work system. It provides us with the money we buy food with. Life is hard. But I have a friend, Raghav. We aren't childhood friends.

We work together, and laugh together, but never have we eaten.

We aren't the same religions, I guess that's the thing that separates us.

Like Black is bad, and White is good, our religions makes us different.

And now I think, we even belong to different sands.

I met Raghav when my parents died, and I had nowhere but his slum.

And Raghav was a generous fellow, his hands never empty while helping,

He was the one who talked to me, when I had none.

And so, resulted our friendship.

His eyes didn't see the Black in me, nor did I see what made him White,

I lent my hand to him as well, when I got a roof, his shoulder.

Why! I owe him life, I owe him all, he gave me work at the construction site,

He is more a friend, and brother to me, he's six years older.

We were friends at once. He looked into my eyes and he knew.

I was a loner. I craved for some company. But more, some food.

He gave me something. That food, after two whole days of hunger!

It brings tears to my eyes when I recall it.

There's no God in this world. What there is, are these people.

They make us feel like God exists, but what it actually is, it's their smile.

They smile, and stretch their hands. I once said he was God to me.

He said. No. What I am is a mere human. And there's no God.

For if God was there, you wouldn't be hungry for two days.
 For if he was there, I wouldn't be here to help you, or the others.
 If he was real, you wouldn't be an orphan in the first place,
 God is just a word they hide behind, just to avoid things like us,
 who bother.

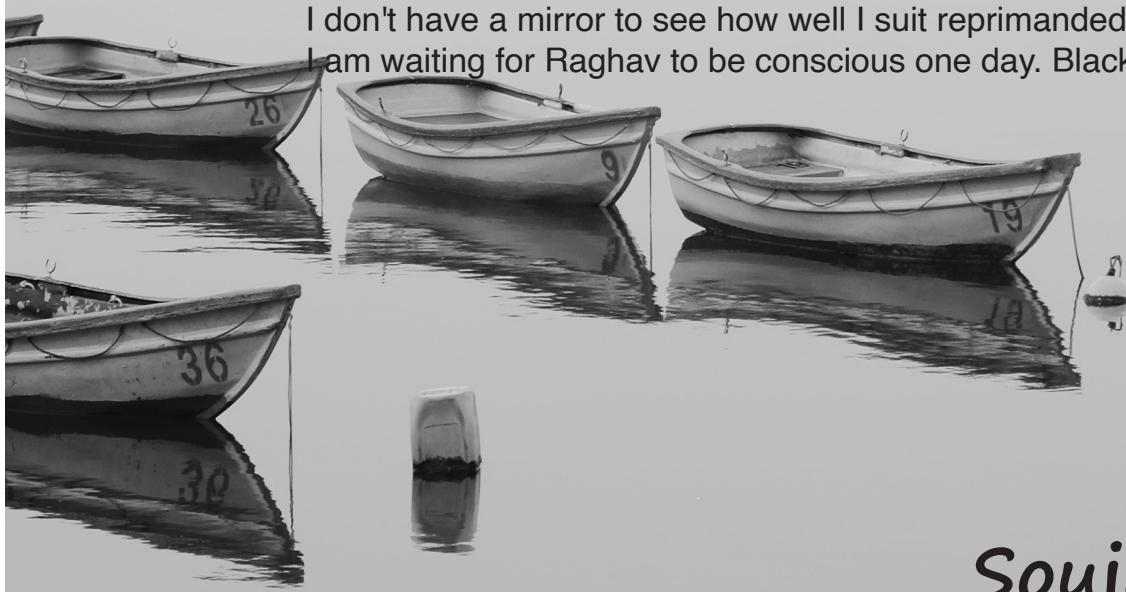
He sounds right when he talks tough, but inside his soul cries,
 A feeling bugs his heart whenever he helps people getting a
 taste of dirt,
 He's a saviour to many, only to face his sister, looking down on him,
 by her eyes,
 His sister's grave. Can he get a place in her heart?

For me, being a 13-year-old boy, and working day & night,
 I question myself sometimes. Luck is so impartial that I laugh.
 It takes away the elders, takes no child. Well, in most cases.
 Are we that simple to play with? Or subject to some falseness?

For an hour a day, I go to school, just to get the mid-day meal.
 I have met some other guys, Raghav gets busy with helping.
 They never soothe me that much, rather tease my race
 Raghav has never seen past my face, neither did I!
 Not making friends is better than tears for Black and White.

People in THIS country, don't know what it feels to be rejected,
 'You're not a part of our society' 'Bloody Pakistani terrorists'
 Every city, every street knows we are not respected
 I am losing my path in this confusing mist!

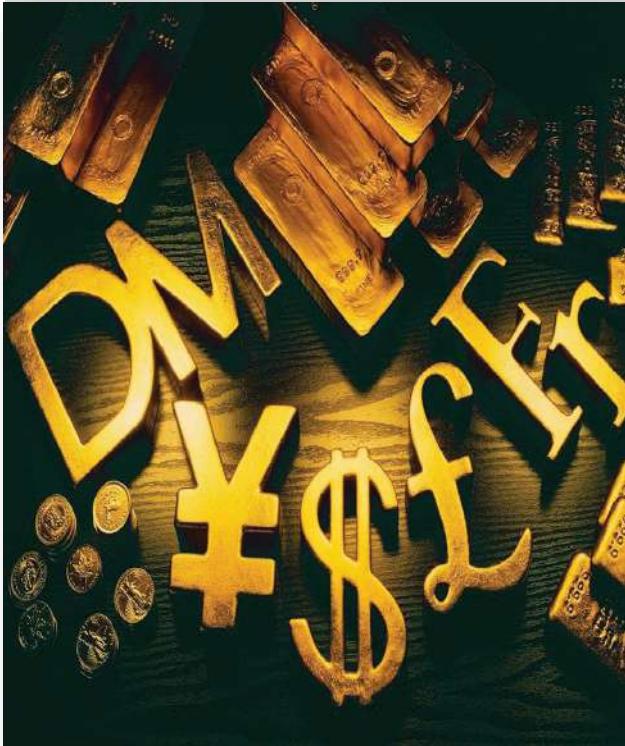
This is how my world will be, Muslim as I was, orphan added,
 Trapped in a world full of people with fangs, with their spite,
 I don't have a mirror to see how well I suit reprimanded,
 I am waiting for Raghav to be conscious one day. Black & White!!



Soujanyo Biswas

CRYPTOCURRENCY

THE RISE OF DECENTRALISED MONEY



What is cryptocurrency?

A cryptocurrency is a digital or virtual currency that uses cryptography for security .

Now, what is cryptography?

In simple language, Cryptography is a method of storing and transmitting data in a particular form so that only those for whom it is intended can read and process it.

Cryptocurrency has been a popular topic of discussion for several years. Since the 90's, there have been many attempts at creating a digital currency during tech boom, with systems like Flooz, Beenz and DigiCash emerging on the market but inevitably failing as initially, the market was not confident to rely on a decentralized medium of exchange .

The important characteristics of cryptocurrencies are that there is no involvement of third parties in its exchange. Where typical currencies are issued from a central bank, cryptocurrencies cut out the middlemen as a peer-to-peer system. This decentralization is touted as one its principal benefits, as it might increase transaction speed and let users avoid fees charged by banks and other more traditional financial institutions. There are different cryptocurrencies in operation like the ripple, LiteCoin, and Ethererum etc. but it is the Bitcoin that remains the largest and most used .



THE BITCOIN BOOM:

The use of bitcoin began in the year 2010.

On 17 Mar 2010, the now-defunct BitcoinMarket.com exchange was the first one that started operating. On 22 May 2010, Laszlo Hanyecz made the first real-world transaction by buying two pizzas in Jacksonville, Florida for 10,000 BTC. In five days, the price grew 900%, rising from \$0.008 to \$0.08 for 1 bitcoin.

The bitcoin had no value in 2009, in 2010 it never topped \$1. During 2010 its highest price for the year was just \$0.39!

BUT the value of a single bitcoin as of September 18, 2018 is \$6361 i.e. 4,63,217 Indian Rupee.

The reasons for its great rise were the advantages it had over typical Currencies like:

- anonymous transactions
- low transaction fees
- Decentralisation
- Ability to store value+ Limited Amount of Coins

• Mineable

Initially, bitcoin was used only for small trades. But in 2014, it suffered a big crash as its popularity increased and the Transaction fees began to rise. But by the end of 2016, it slowly gained Momentum once again.

PRESENT USE:

The use of cryptocurrencies is increasing day by day. In countries like US, Canada, Australia the use of bitcoin is legalized and is linked with their Own currencies.

In India, they are not yet recognized as legal tender while in Communist countries like China, it is absolutely illegal as it is decentralized.

FUTURE:

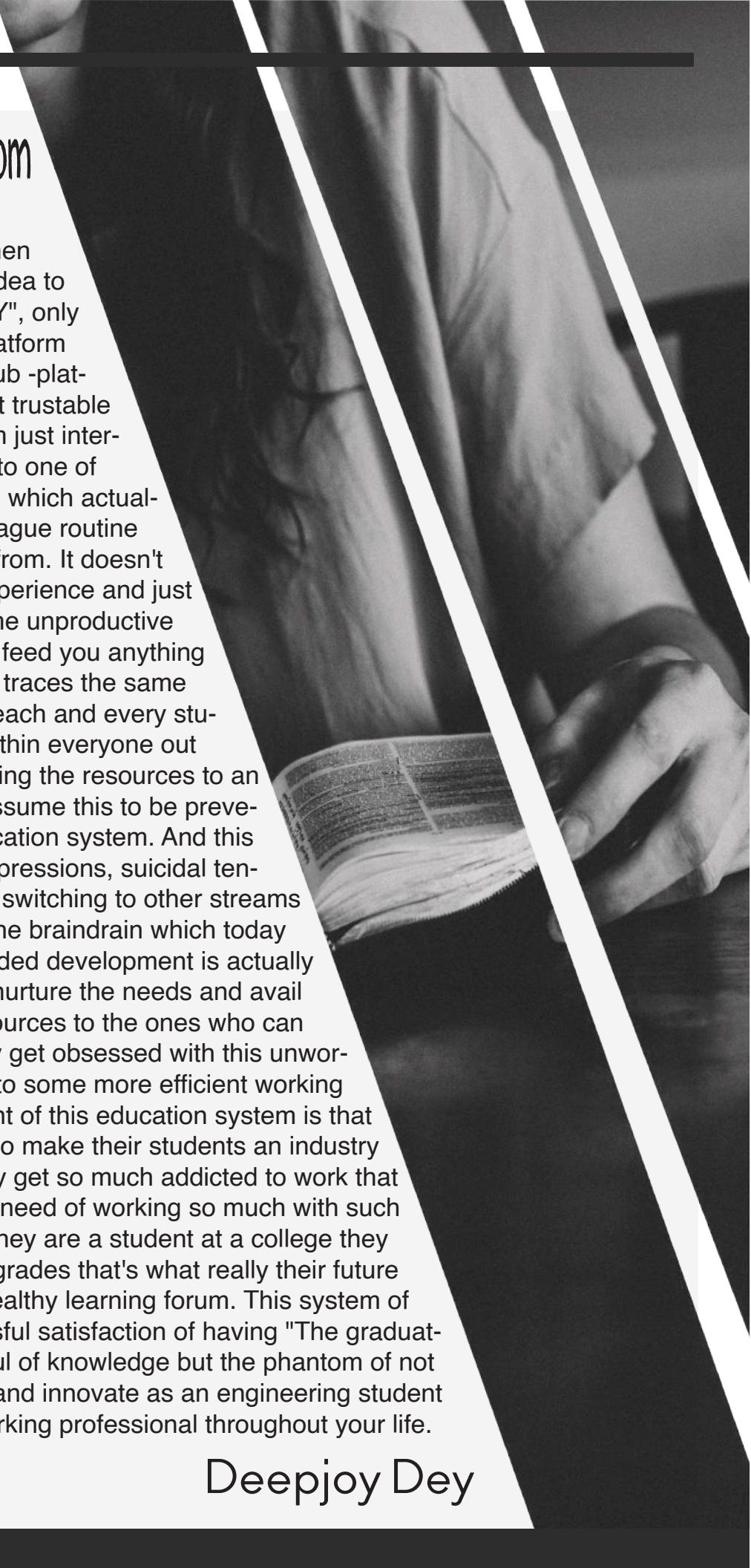
Although the use of bitcoin is in its full flow, there are possibilities of a major Downfall because of its increasing use in illegal activities involved in the DARK WEB, a part of the internet that isn't visible to search engines and requires the use of an anonymizing browser called Tor to be accessed. Still most of the experts are confident of its further rise in the future. Infact there are prospects of a 2nd bitcoin or any other cryptocurrency led BOOM.

Punyabrat Saikia



The Engineering Phantom

The greatest illusion of human mind revives its essence only when he/she dares to convert his/her idea to reality. But what's "THE REALITY", only matters. The Indian education platform has only been divided into two sub-platforms which is the so called most trustable future scopes to step forward. I'm just interested in forecasting the realities to one of them, it's "THE ENGINEERING", which actually has become a dull and tiring vague routine that owes nothing to be learned from. It doesn't let you carry out any practical experience and just creates compulsions to read some unproductive subjects which actually does not feed you anything to your line of interest. It actually traces the same obnoxious so called qualities to each and every student that slowly kills the spark within everyone out there, who dreamt of experimenting the resources to an asset to the nation someday. I assume this to be prevalent in every colleges of our education system. And this has been the major cause for depressions, suicidal tendencies and lacking interest and switching to other streams at the later part of this degree. The brain drain which today we held responsible for our retarded development is actually just because we are not able to nurture the needs and avail the required technology and resources to the ones who can create miracles out of it. So, they get obsessed with this unworthy system of working and get into some more efficient working places. The greatest achievement of this education system is that it has quite efficiently been able to make their students an industry ready professionals, who actually get so much addicted to work that they aren't able to recognise the need of working so much with such insignificant outputs. And when they are a student at a college they are compelled to watch out their grades that's what really their future stagnates to and promotes no healthy learning forum. This system of learning can only promote a blissful satisfaction of having "The graduated degree" and may be handful of knowledge but the phantom of not been able to try something new and innovate as an engineering student will annoy you everyday as a working professional throughout your life.



Deepjoy Dey

Freedom

Speak up. You've got the chance.
 The thoughts that coloured your mind.
 And you perspired to prosper your
 thoughts.

So why not?

Freedom. We don't have the freedom.
 Freedom too bleak. Of speech. Of
 thought.

Achievable only in the books, in the
 partial pages.

But truth doesn't give itself a garland.
 How would we?

Thousands cry. Tears wet this soil. But
 not the soul.

From another religion is wrong. No food.
 From a different colour is wrong.
 Our hearts are dark and not their faces!
 Walking alone in the streets isn't safe.
 It's late.

And you're out alone.

There's malice all around. And little
 freedom.

Your steps. You speed 'em.
 And someone's heart there isn't beating.
 And the plus they use is to multiply.
 Not life. But money.

Those who have it there's freedom.
 You haven't so you're damned.
 The stars are best meant in the sky.
 The uniforms shouldn't carry them.
 And the bars shouldn't carry the wrong.
 Because they lessen our freedom.
 And now I'm scared of the night, of the
 stars.

Someone might just come and tear me
 apart.

But then again. It's freedom that the
 Constitution has handed.

If we just had the freedom to demand it.



Nature

A Permanent Source of Happiness

Nature is the shower of blessings which we had received from the God. It removes negative energy from our body and fills it with positivism. The calmness of nature goes deep into our heart and renders the feeling of joy and happiness.

Many poets had been attracted by the beauty of nature. John Keats' "A Thing Of beauty" and William Wordsworth's "Daffodils" has described the beauty of nature in true sense. It visualized the beauty. The sound of wind, the waves of oceans, the rising sun and sunset, the drops of rain, Rainbow etc., all these beauty energize us. The rising Sun gives the meaning to forget the past and start a fresh. A few drops of rain makes us forget the worries, tensions and anxiety. We just feel as the drops are coming from the heaven, blessing us with its drop.

The rainbow which usually forms after rain shows how the different colors combine together and form a beautiful pattern which shows how that unification makes our life beautiful. The beauty of a person is always compared with the moon.

The stars twinkling in the night gives us the message that there is always a ray of hope in the darkness. The trees selflessly give us the fruit secretly giving a deep message for us.

Nature always teaches something. We all experience happiness when we sit alone listening to the chirping of birds, feeling the breeze. Nature is really precious for us, and there is a need to conserve it, otherwise we might lost it forever and in turn, will not be able to find ourselves. Positiveness will be replaced from negativeness. Hope will become hopelessness and happiness will be converted into sadness.

Mohit kumar singh

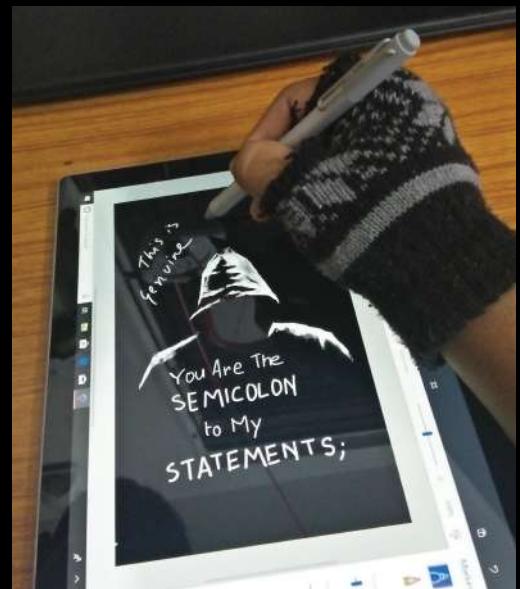
HAPPINESS

HAPPINESS COMES NOW AND THEN,
WE CANNOT BE SEEN JUST WHEN.
BUT WHEN IT'S THERE, ENJOY EACH
HOUR
BECAUSE HAPPINESS HAS SUCH
POWER.

JOY TO YOU IT WILL BRING,
EVEN MAKE SOMEONE ELSE SING.
WHAT PEACE OF MIND HAPPINESS CAN
SHOW

MAKING YOU AND OTHER GLOW,
NURTURE IT MAKE IT LAST FOREVER
FORGET THE TROUBLES OF THE PAST.
NEVER FEAR THAT IT WILL GO
FOR IT COULD ALWAYS GROW.
AND THEN TOMORROW THERE IT WILL
BE
FOR HAPPINESS CAN SET YOU FREE.

CHINMOY TALUKDAR



You Are The
SEMICOLON
to My
STATEMENTS;

Mithun
14.05.15

QUEST FOR HAPPINESS

Odd choice of topic, isn't it?

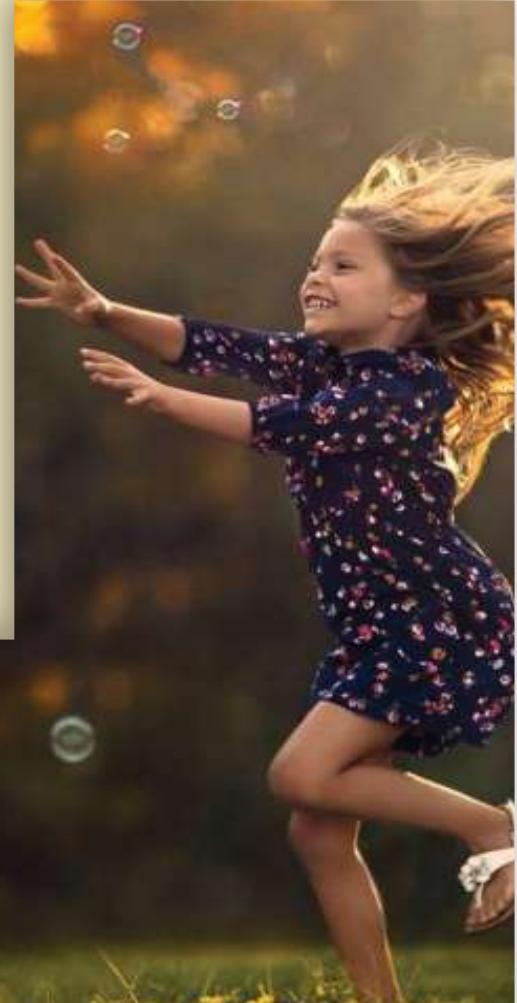
Happiness seems to be such an acquirable feeling, but surprisingly, it is something people end up craving for. The number of people living with depression in India has increased by 18.4% between 2005 and 2015. This mental disorder effects nearly one in every 20 people across India. Now you see. Being happy ain't that easy. Happiness is letting go of what you think life is supposed to be and celebrating it for everything that it is. In today's world, the word depression is quite common in our usual vocabulary. It is a feeling of severe despondency and dejection. This feeling turns up when pessimistic thoughts increase exponentially. In India, more than 45 cases of attempted suicides are reported to the police everyday. Well, it takes to die by choice. I personally pity those poor creatures. One should stay away from pessimists. They can make sure that even our happiest memory blinds us with tears. One should do all, it takes to avoid them. What is meant to happen, will anyways happen eventually. Overthinking only destroys our happiness. Someday, when we look back, we'll understand why it all happened the way it did.

Happiness is a choice, not a result. Nothing will make you happy, until you choose to be so. No person can fill our life with joy unless we allow ourselves to be happy. Our happiness will not come to us rather it will emanate from us. Learn to fight to your own demons. Sometimes you need to break some bridges to create some distances. The definition of happiness differs from person to person. Let me cite an example. On a usual evening, a little 5 year old boy was given a glass of milk to drink.

He gulped down half the glass and exclaimed, 'I am an optimist, because I recognise that half the glass of milk is empty!' his father who was seated nearby replied, 'My dear, that's pessimism.' The boy pointed out, 'Only if you like what's there in the glass.' Now, the kid's idea of optimism differed from his dad. Similarly, my idea of

happiness might be completely contrary to yours. Deep inside, everyone knows the truth. Just follow your dreams. You don't have to prove anything to anyone. It's your life. Just remember that maybe the life's journey is not so much about becoming anything. Maybe it's just about unbecoming everything that isn't really you, so you can be who you were meant to be in the first place. After all, as dumbledore said: 'Happiness can be found in the darkest of times if one only remembers to turn on the light'.

Prakruiti Ray Choudhary



I Miss You Dad

I miss you Dad, whenever I see a father giving a present to his boy.

I miss you Dad, whenever I see a child on his father's shoulder.

I miss you Dad, whenever I see a man teaching his kid riding a bicycle.

I miss you Dad whenever I see a father scolding his child for low grades.

I miss you Dad, whenever I see well-dressed man attending a PTM meeting or an annual function.

I miss you Dad, whenever I see uncle giving pocket money to my cousin.

I miss you Dad, whenever I see a man running behind his son with a Stick in hand and anger on face.

I miss you Dad, whenever I hear my friends going on a bike ride with their father.

I miss you Dad, whenever I see a teenager making a facebook account for his/her father.

I miss you Dad, whenever I see a father wearing a jeans on an insist.

I miss you Dad, when I hear stories about how my friend and his father sneak out of home at night for having yummy foods.

I miss you Dad, whenever I see uncle photo-bombing my cousin's picture deliberately.

I miss you Dad, and will keep doing.

Yours loving Son
-Aditya

Aditya Gupta

Shadows Of Light

With a pleasing heart and righteous soul,

A child is sent from god's new mould,

Sent on earth with gracious grace,

He enters the doorway of life's new race.

Opening the doorway of life's new race,

**He comes across many a phase,
Which brings him joy and sorrow,
Experiencing a novel taste each tomorrow.**

As the taste buds sharply sensitize,

Various ups and downs are realized,

The mind and soul strengthen themselves,

To keep away from all avarice.

When all avarice is kept away,

The life has lead a holy way,

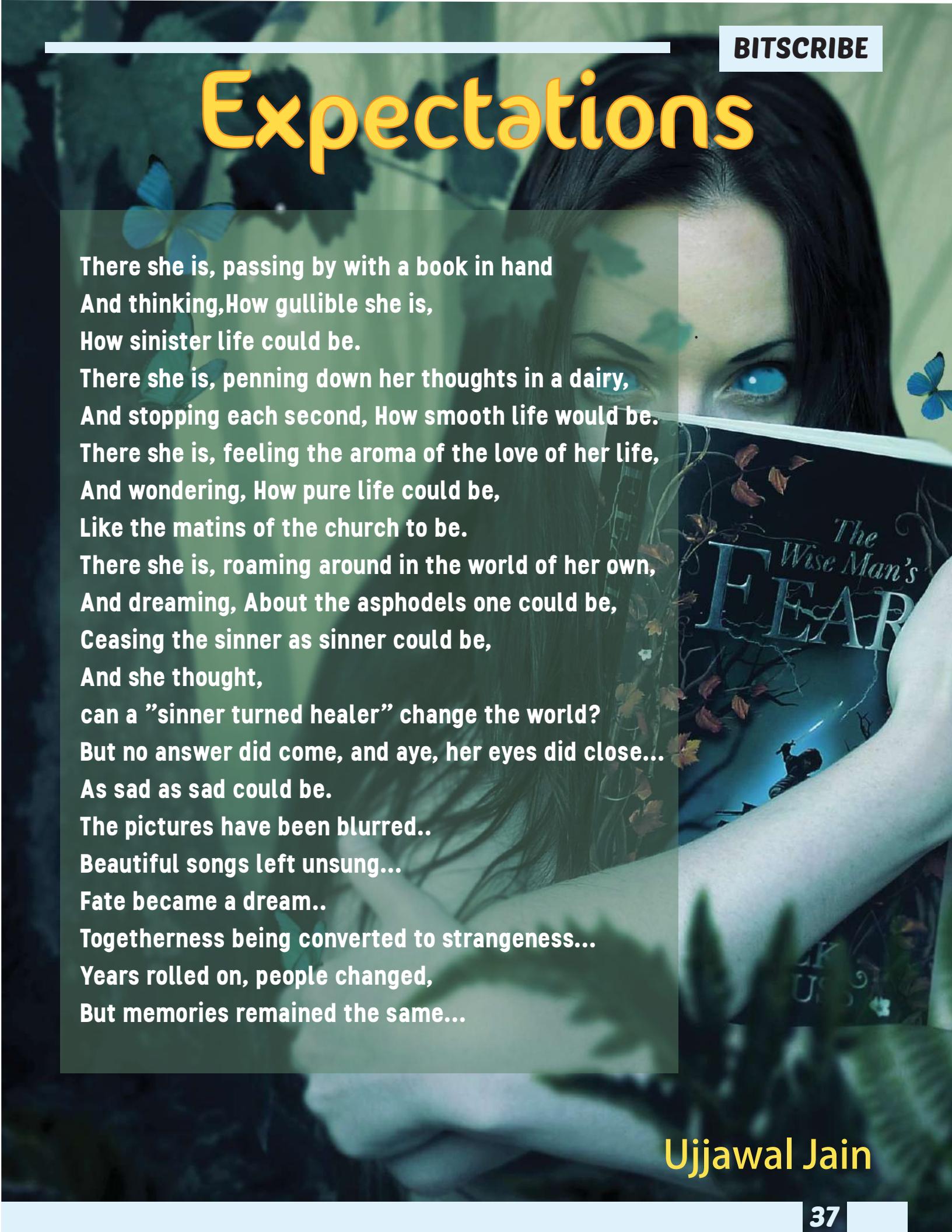
The years have passed glorifying each day,

**Then the soul succumbs itself,
To heaven's divine gateway.**



Manisha Beriya

Expectations

A close-up photograph of a woman's face. She has dark hair and is looking directly at the camera with a neutral expression. Several blue butterflies are visible in the background, some on her hair and one on the right side of the frame. In the lower right corner, a portion of a book is visible, showing the title "The Wise Man's FEAR" and some decorative illustrations of leaves and branches.

There she is, passing by with a book in hand
And thinking, How gullible she is,
How sinister life could be.

There she is, penning down her thoughts in a dairy,
And stopping each second, How smooth life would be.
There she is, feeling the aroma of the love of her life,
And wondering, How pure life could be,
Like the matins of the church to be.

There she is, roaming around in the world of her own,
And dreaming, About the asphodels one could be,
Ceasing the sinner as sinner could be,
And she thought,
can a "sinner turned healer" change the world?
But no answer did come, and aye, her eyes did close...
As sad as sad could be.

The pictures have been blurred..
Beautiful songs left unsung...
Fate became a dream..
Togetherness being converted to strangeness...
Years rolled on, people changed,
But memories remained the same...

Ujjawal Jain

Silent Words

**Why did you leave me?
SILENT words across a
screen,
How could they mean so
much to me?
I promised myself I would
not cry,
Then a silent tear falls from
my eye.**

**What did I do, what did I say?
To make you change your
mind, the day you went away,
Every day, waiting for a sign,
To let me know, you might
still want to be mine.**

**Another day comes and goes,
I want to write, but I can't I
know,
You said you needed me more
than I needed you,
Why would you say that, if you
knew it wasn't true?**

**Why did you say you loved
me?**

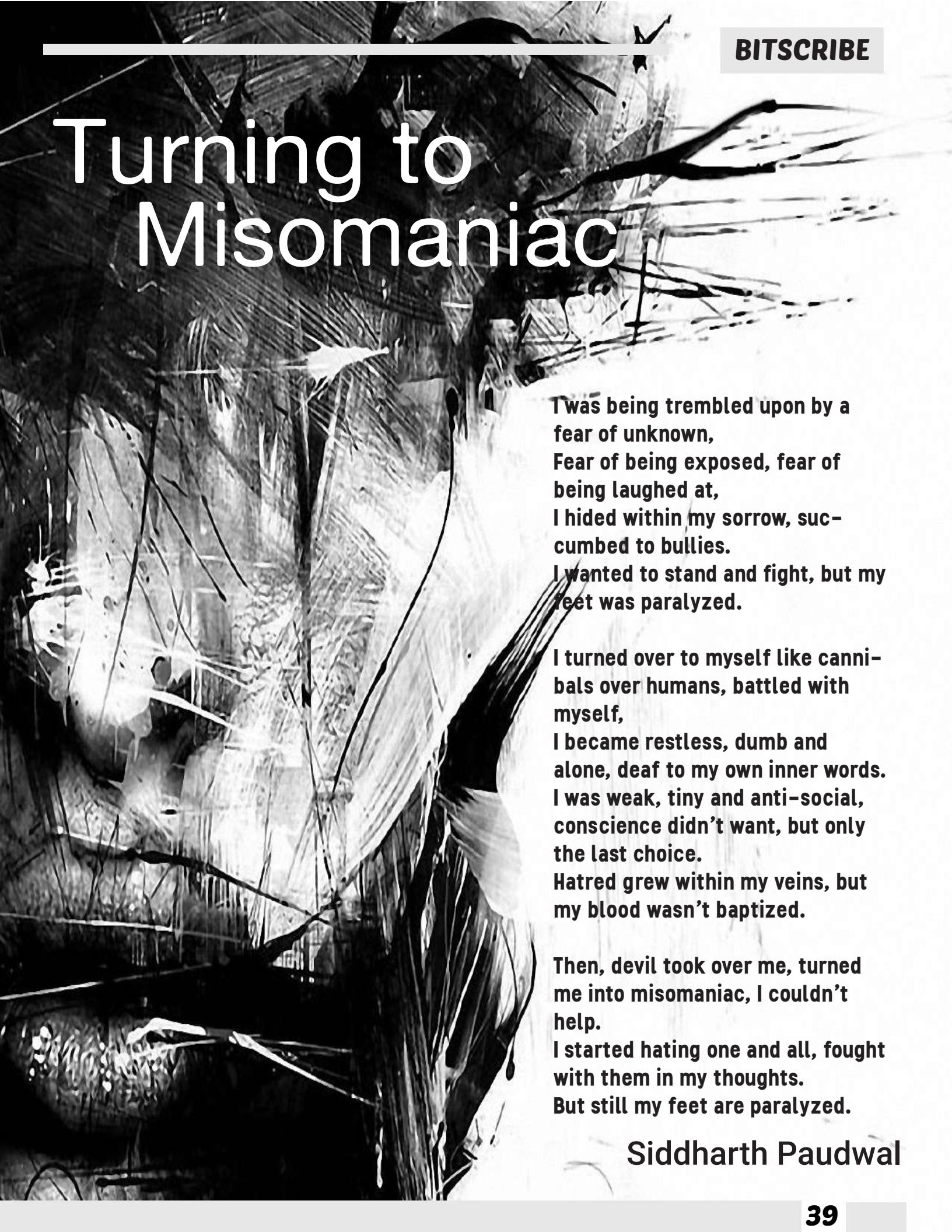
**Then turn around and set
me free?**

**I love u and want you,
But I know I can't make you
love me**



Manisha Beriya

Turning to Misomaniac



I was being trembled upon by a
fear of unknown,
Fear of being exposed, fear of
being laughed at,
I hided within my sorrow, suc-
cumbed to bullies.
I wanted to stand and fight, but my
feet was paralyzed.

I turned over to myself like canni-
bals over humans, battled with
myself,
I became restless, dumb and
alone, deaf to my own inner words.
I was weak, tiny and anti-social,
conscience didn't want, but only
the last choice.
Hatred grew within my veins, but
my blood wasn't baptized.

Then, devil took over me, turned
me into misomaniac, I couldn't
help.
I started hating one and all, fought
with them in my thoughts.
But still my feet are paralyzed.

Siddharth Paudwal

These Thoughts of Mine

There are times when your mind is split between two conflicting thoughts of yours. These are the thoughts that govern your decisions. They make you happy, they make you strong, they make you go weak, they make you cry your heart out and can literally either make you or break you. Personified thoughts have brains of their own. The following is a conversation or more appropriately a question and answer session between two such thoughts of mine.

So what exactly art thou now?

“I don’t know, perhaps the same weirdo with the same name, with the same heart and the same mind, only not as fragile and wrecked as I had been.”

Are you sure, my dear friend?

“Never more. I understand what you’re trying to say. I know there are the things I used to love, things that I lost. But I have realized I may miss certain of those but can’t have them back. Well it took me a long while, I’ve changed for good.”

Things? Really?

“Yeah. I said things because there prevails no apparent discrepancy between things and people. People turn out to be lifeless objects, hiding themselves behind facades of falsehood and fake smiles, hatred and pretensions – thus making them heartless as ‘things’. You can’t expect attachment when the foundations of today’s relationships are constructed of betrayal and selfishness.”

I agree. But are you definite that you don’t want these things back? They belong to you after all?

“Positive. You don’t get it yet, do you? What belongs to you shall always be yours. They were never mine, hence they left. Of course there are people I miss. But now in their absence, I feel I’m better off. I can’t get illuminated by the same fire that burnt me into ashes. I am not going to get burnt by the same fire twice. Ashes don’t burn.” It’s not always wise to reckon oneself as the lion when surrounded by mice.

smirks

You aren’t that strong yet. Stop living in this fantasy world of your own. The reality is you’ll melt like wax when you’ll feel the warmth of your heart which is inevitably going to submit itself to its mere sight.

“Can’t you be more obnoxious?

gives that agitated look

Being ME, you should be on MY side. Thoughts make you they said. Thoughts break you they didn’t.”

laughs

“To be candid, a trifling part of somewhere deep inside me still loves them. But gradually, I’ll make it non-existent. The reason being that this time, I choose to live for me, this time I’m my first priority, this time I choose to love myself. And that has given me the ample audacity and strength to look them in their eye, bear the reflection of their smile in mine, hear their voice and still be able to say, “This isn’t what I want anymore. YOU aren’t what I want anymore”. This is surely going to take everything I have, saying this to somebody who once meant the world to me. But I’ll survive.”

Don’t you want them to feel the same agony as you had?

“They will. Karma says, “Thou shalt fall in love with the one who doesn’t love thou for not loving the one who did”, and this is perhaps the realest thing I’ve heard. I’ve now apprehended the fact that my happiness is not ought to rely on anyone else. I didn’t lose the person I loved my heart out to. The person lost me. I AM that one of a kind. I WILL be searched in someone else. But not a minuscule of me would be found ever again.”

You sound so much wiser now. Don’t ever give up on yourself.

“No, don’t worry. I won’t give up on you.”

smiles

Meet you someday later, more likely when you’re trying to sleep.

“No, please don’t.”

I will.

gives the evil smile

“Arghh!!! Satan will...”

I AM your Satan sweetheart

laughs and waves hand

Goodbye.

Research

A Big Gamble

Trend of new era is to carry on more and more research in the technical field. The government is also taking lots of new initiatives to promote research and development through various scholarships and attractive schemes. But, have we ever thought in which direction of research we are going towards. If observed closely, most of the students are interested for persuading higher studies abroad. The reason is very obvious, due to various facilities provided to Asian students. Opportunities for jobs also increases in foreign countries if a degree is acquired from there. In India, we had quite good number of students opting for higher studies by qualifying tough exams like GATE. The way India is rising in the Global sector for better technical education and research approach, it is highly appreciable.

Biggest concern nowadays is the research direction or the topic of research we are taking into consideration, especially for computer science field. Computer science is an emerging area and newer fields of research are coming into picture every subsequent day. Trend is that topics floated for conferences and journals (international), we usually focus on those areas to make our work more attractive and acceptable.



Pinki Roy

The Modern Family

Batch of 2021



Batch of 2020

Batch of 2019



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