V DYUTH

2K'18 VOLUME-2

DEPARTMENT OF ELELCTRICAL AND ELECTRONICS

SRI KRISHNA INSTITUTIONS COIMBATORE

SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY

(AN AUTONOMOUS INSITUTION)
AFFILIATED TO ANNA UNIVERSITY CHENNAI
ACCREDITED NAAC WITH 'A' GRADE
KUNIYAMUTHUR,COIMBATORE-08,TAMIL NADU,INDIA

PERFECTION THROUGH PERFORMANCE

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Electricity is one of the inevitable sources of energy in the world. We produce engineers to enhance and establish it in a smart way. We offer one undergraduate programme of 4 years duration and one post graduate programme of 2 years duration. We totally have 43 faculty members who are knowledgeable and enthusiastic, imparting their skills and technical knowledge over 750 students who are pursuing their Undergraduate and Post graduate courses in our department. We have well equipped laboratories with good infrastructure which has ten lakhs worth equipment's and components in 6 core and 2 computer laboratories. The department has a library which contains over 511 books in different streams of EEE.

EDITORIAL TEAM

CHIEF EDITOR

Dr.K.LAKSHMI,Head of the Department,EEE

FACULTY EDITOR

Ms.C.Pavithra Asst.Prof /EEE
Ms.A.Selvanayakam Asst.Prof /EEE

STUDENT EDITOR

Tarjan babu.S
Anandhakumar.S
Arundhathy.T.S
Sreenidhi.T.V
Yuvan raj kumar.N
Nivin.B
Roopashree.R

Any art needs an arena for expression. Be it writing, painting or tingling! any funny bone, the right stimulus can kindle the deepest thought. Vidhyuth aims exactly at this. The department of EEE takes great pride in presenting its readers with Vidhyuth the official magazine of the Department Apart from contributions from our students, Vidhyuth also covers the activities of 'The Teslaenians' the official association of the EEE department. It also takes about the various research and paper publications of the faculty whose stand steadfast, as pillars of support. Alma mater plays a great role when it come to the work front. Vidhyuth also delves into the amazing placement records of its successful students who have sealed their berths in various core and product companies. The Department as a whole believes in an all-round development of its engineers. Be it sport or culturals, EEE engineers make sure that their presence is felt. We, editorial team, hope that you love the work of all it's members and the contributors until the last page.
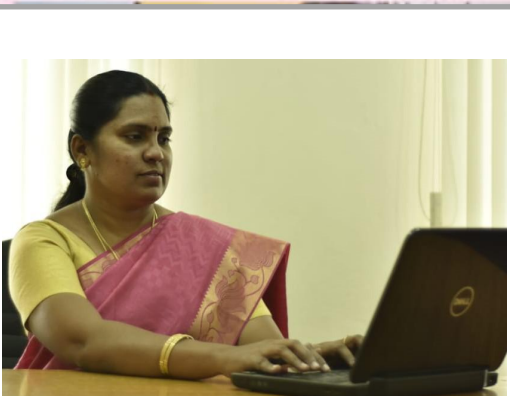
CHIEF PATRON

Smt.S.Malarvizhi
Managing Trustee

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Dr.J.Janet

HEAD OF THE DEPARTMENT

Dr.K.Lakshmi

VISION & MISSION

INSTITUTE

VISION
To Produce Globally Competitive Engineers with High Ethical Values and Social Responsibilities.

MISION

* To impart highest quality state-of-the-art technical education by providing impetus to innovation, Research and Development and empowering students with Entrepreneurship skills.
* To instill ethical values, imbibe a sense of social responsibility and strive for societal wellbeing.
* To identify needs of society and offer sustainable solutions through outreach programs.

DEPARMENT

VISION

To provide the students with high quality technical education in the field of Electrical and Electronics Engineering enabling them to become competent and responsible engineers with employability and entrepreneurial skills.

MISION

M1: Equip the students with adequate knowledge in the field of Electrical and Electronics Engineering and professional skills necessary to face the future challenges with confidence and courage.

M2: Engineer them to engage in research activities leading to innovative applications of technology.

M3: Enable them to become responsible citizens of the country with a willingness to serve the society.

Program Educational Objectives (PEOs)

PEO1: Graduates will have successful career in industry that meets the needs of Indian and multinational companies.

PEO2: Graduates will synthesize data and technical concepts for application to product design and to solve research problems.

PEO3: Graduates will work as a part of teams on multidisciplinary projects with good communication and interpersonal skills.

PEO4: Graduates will exercise their knowledge in mathematical, scientific and engineering fundamentals to formulate, analyze and solve engineering problems following ethical practices.

PEO5: Graduates will exhibit life-long learning updating knowledge continuously.

Program Specific Outcome (PSOs)

After the successful completion of the B.E. Electrical and Electronics Engineering programme, the graduates will be able to:

PSO1: Explore the physics and mathematical concepts, methodologies and cutting-edge technologies in the field of Electrical Engineering to design, implement, operate and maintain energy efficient system.

PSO2: Engage in the design and development of integrated electronic systems applying the relevant hardware and software tools.

PSO3: Adopt ethical Practices lifelong in their profession in the field of Electrical and Electronics Engineering.

PROGRAM OUTCOMES

Engineering Graduates will be able to

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex electrical and electronics engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze electrical and electronics engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex electrical and electronics engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex electrical and electronics engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write efftive reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

INDUSTRIALVISIT

Industrial visits normally brings tons of happiness and enthusiasm in kind of like everybody Prof. S.Gobhinath and Prof. D.Malathy along with II yr EEE "A" students visited JV'S electronics on October 7 2017 at Bangalore

Industrial visit - the joy of celebrating the important phase of life at the perfect location of happines."Prof. N.Shubashini and Prof. R.Guruprasath along with IIIyr EEE "C" students visited on october 7" 2017 at Kerala.

Out of hundred percent, 0.1% of students always have the intension of attending classes taught only in the classrooms. But the remaining 99.9% prefer to just go out of the campus and experience a field learning along with a blow of enjoyment. Prof. T.Kesavan, Prof.M.suganya and Prof.S.Boobalan along with II Yr EEE "A" students visited Mescom industry on October 7" 2017 at Mangalore.

Prof.S.Sarumathi and Prof.N.subhashini interacted with south Indian head, VI solutions,Bangalore and discussed about the improtence of lab view and it's application in industries

Prof.T.Nandhakumar & Prof.G.Manochitra along with III Yr EEE "A" students visited kaynes technology on October 27th 2017 at Bangalore

Type your text

Prof.Mr.Guruprasath and Prof.T.Bhavatharanai along with II Yr EEE "C" sudents visited i-Fox wind care Solution on 15-02-201 at Pollachi

INAUGURATION OF ALUMINI MEET

EEE ALUMINI INTERACTION

Ms.S.Priyadarshinin IAS (BE EEE-2005-2009 Bateh Alumnus) interacted with the II and III year students of EEE about "Preparation of Civil service Competitive Examinations" held on 07-02-2018

EEE ALUMNUS AS JURY FOR PROJECT EXPO

Mr. R.Sriram (BE EEE 2009-2013 batch Alumnus) Senior Software Engineer, Robert Bosch, judged the ll and lll EEE students' projects in "YUKTHI 2K18" a project expo held on 15th september 2018.

ALUMINI INTRACTION WITH STUDENTS

Department of EEE organized an alumni interaction with the students on 18th December 2017. Mr.R.Srinath (BE EEE 2012-2016 Batch Alumnus) MS graduate, Department of Electrical Engineering Rochester institute of Technology, Rochester Newyork delivered a lecture on Research and Higher Studies in Abroad.

Mini projet Expo was organized by EEE Department on 15th September 2018.

Mr.S.Pranesh (BE EEE 2012-2016 Batch Alumnus) Software Engineer, Robert Bosch judged the projects.

Mr.Thamaraikannan(BE EEE 2001-2005 8atch Alumnus) Proprietor, Virtual technologies Mr.S.S.Vignesh (BE MECH 2002 200 Batch Alumnus). Proprietor, SNS Hi-Tech Engineers Ltd and Mr. Sathish (BE CSE 2002-2007 8atch Akumnus) evaluated the projects for IEDC funding.

Workshops, Seminar, Guest Lecture organized by the Department:

1	10.01.2018	Webinar on "Corporate world for an Engineer @ 2020"	Mr.Saiphanindra, CTS, Hyderabad
2	20-01-18	Recent Trends in Transmission and Distribution Systems	Mr.P.Sevugaperumal, AE/110/22KV SS, TANGEDCO, Pollachi
3	07.02.2018	Preparation of Civil Service Competitive Examinations by Alumnus Ms.Priyadharshini IAS	Ms.S.Priyadarshini, IAS (EEE- 2005-2009 Batch Alumnus)
4	09.02.2018	Expert Talk on "Opportunities for Higher Studies in abroad" Expert Talk on "Opportunities for Higher Studies in abroad"	By Career Zone
5	16.02.2018	Hands-on workshop on "BLOT Microcontroller" by final year EEE students to II EEE students.	Final EEE students
6	09.03.2018	Guest Lecture on 'RTOS and Embedded Controllers'	Dr.R.Maheswari,VIT University
7	03.03.2018	Alumni Interaction on "Higher Studies at Abroad	Ms.Padmapriya, Alumni,EEE
8	07.04.2018	One Day Seminar on Low voltage insulation and Coordination	Mr.S.Karthikeyan, Manager, EPPC Division, ABB, Bangalore

STUDENTS ACHIVEMENT

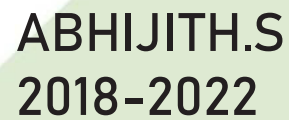|					
1	Table Tennis -Men	COVAI TIES-2018 Inter Engineering Sports and Games	Sri Krishna College of Engineering & Technology	01-02-2018 03-02-2018	RUNNERS
2	Basket Ball-Men	11th TCE Trophy Intercollegiate Basketball Tournament	Tamilnadu College of Engineering	23-03-2018 25-03-2018	WINNERS
3	Basket Ball-Men	Avantaa Intercollegiate Basketball Tournament	Sri Krishna College of Technology	14-03-2018 15-03-2018	RUNNERS
4	Basket Ball-Men	CIET Trophy Intercollegiate Basketball Tournament	Coimbatore Institute of Engineering and Technology	08-03-2018 10-03-2018	THIRD PLACE
5	Chess-Men	COVAI TIES-2018 Inter Engineering Sports and Games	Sri Krishna College of Engineering & Technology	01-02-2018 03-02-2018	WINNERS
6	Football-Men	PPG FIVEs Intercollegiate football Tournament	PPG Institute of Technology	06-03-2018 07-03-2018	RUNNERS
7	Cricket-Men	Anna University Zone 10 Intercollegiate Cricket Tournament.	Sri Krishna College of Engineering & Technology college	17-08-2017 23-08-2017	WINNERS

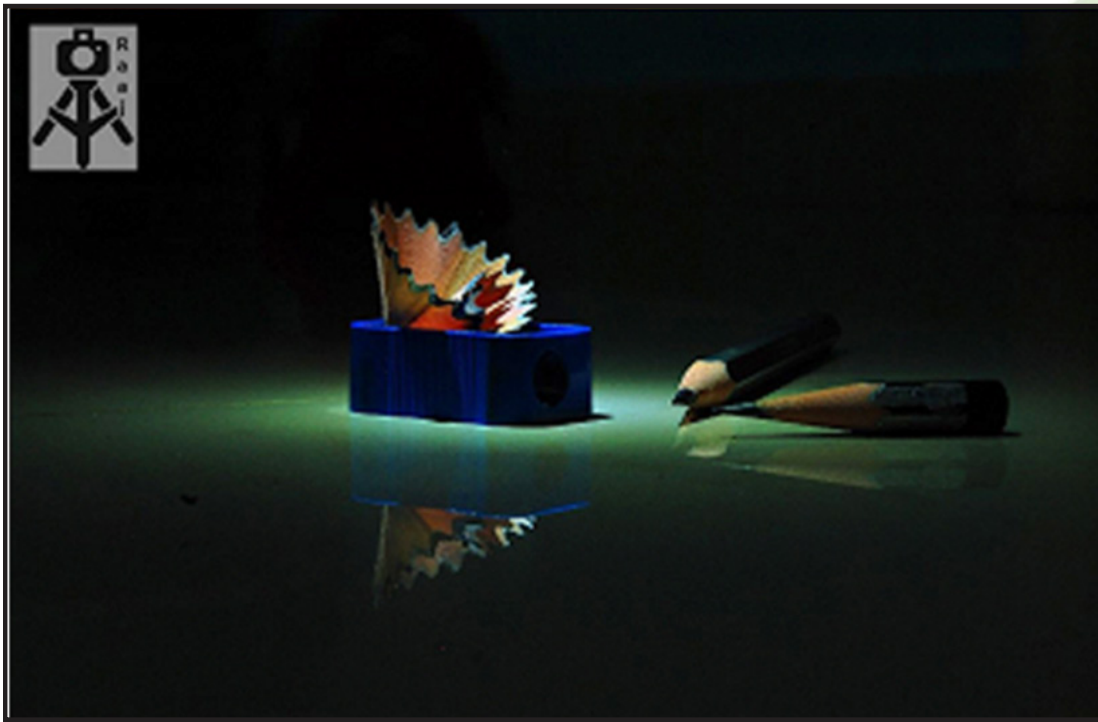|					
8	**Volleyball-Men**	**CIT Trophy Inter-collegiate Volleyball Tournament**	Coimbatore Institute of Technology	09-03-2018 - 11-03-2018	**WINNERS**
9	**Throw Ball-Women**	**COVAI TIES-2018 Inter Engineering Sports and Games**	Sri Krishna College of Engineering & Technology	29-01-2018 to 31-01-2018	**THIRD PLACE**
10	**Volleyball-Men**	**JCT Trophy Intercollegiate Volleyball Tournament**	JCT Institute of Engineering and Technology	15-03-2018 16-03-2018	**WINNERS**
11	**Volleyball-Men**	**PPG Alumini Trophy Volleyball Intercollegiate Tournament**	PPG Institute of Technology	06-03-2018 07-03-2018	**THIRD PLACE**
12	**Volleyball-Men**	**7th Chinnasamy Memorial Trophy State Level Intercollegiate Volleyball Tournament**	Adithya Institute of Technology	09-04-2018 10-04-2018	**WINNERS**

Gokul S of II EEE with his team members represented Indian team in the INDO NEPAL INTERNATIONAL YOUTH SPORTS TOURNAMENT and achieved first runner up in football finals

STUDENTS LAUREL IN TECHNICAL EVENTS:

S.NO	DATE	EVENT	INSTITUTION	STUDENT NAME	YEAO OF STUDY	PRIZE WON
1	22.03.18	**National Level Technical Smposium-Circuit O-Crush**	Coimbatore Institute of Engineering and Technology	**Anusuya.M**	III	**Second Place Second Place**
2	22.03.18	**A National Level Technical Smposium- Circuit O-Crush**	Coimbatore Institute of Engineering and Technology	**Jeyavani.R**	III	**Second Place**
3	05.04.18 -06.04.18	**A National Level Technical Symposium-Electropedia**	GCT -Coimbatore	**Joezeet Flora**	III	**First Place**
4	05.04.18 -06.04.18	**A National Level Technical Symposium-Paper Presentation**	GCT -Coimbatore	**Gobigadharani.D**	III	**Third Place**
5	13.02.18	**Logo Smash-**	Karpagam College of Engineering Coimbatore	**Hema Priya.D**	III	**Second Place**

ART WORKS

ABHIJITH.S
2018-2022

HARIDHARAN R
2018-2022

CLICKS (*PHOTOGRAPHY*)

Ravishankar.G
(EEE 2015-2018)

LIVING EMPOWERED

Women are achieving.

It is about time we stop talking about Rani Laskhmi Bai, Annie Bessant, Sarojini Naidu, Vijalakshmi Pandit, Kalpana Chawla, P.T.Usha. Present scenario women are achieving facing more crisis than the above. If it was a heart attack that killed the burning desire in the hearts of women in early centuries. It is a myocardial infarction that kills the fire inside the women of present scenario. I know, this talk widens the eyebrows of women and shrinks that of men. To all those men out there, have not we proved to be mentally strong than you? What can I call an literate man who runs a business, yet, do not send his girl child to a co-education school, instead, puts her in all girl's school? What can I call an literate man in a good position marries an educated woman who know his wife has two or more degrees, still does not allow her to work? Can I call them an uneducated literates or a men chauvinistic society? Hope I am not taking you to 20th century. In every perspective women blame the opposite gender but let us look into it in a different angle. To make it clear, let me share few incidents that happened in India. Recently, the divorce case of Shah Bano was an eye opener or the best example of the real plight of women in India. Upon separation from her husband, it claims that she has no rights on her property or cannot hold shares or even the property she brought from home, and seems she should ask her husband for maintenance. To a pathetic situation as a wife, she supported her partner for decades but as an abandoned ex-wife, her maintenance posed a challenge even for the Indian constitution. Getting rewinded little more, the girl who was raped on a moving bus in India's capital New Delhi was the talk on each and every mass media of communication. It was the talk until she passed away or a week after that. Can I ask you something? Was justice fortune to her? Surely not. Were they punished as they should have been? Let's imagine something. If the entire mass of women would have stepped down from home, joined hands, and protested, the history would have changed. This is the exact thing I am talking about. Women who are in developing areas keep achieving. What about the women who are still under the shadow of strong men chauvinistic society? An old saying says "Women are women's enemy". So as to disprove this fact, as a woman how are we going to support the other women? For a while, let's stop blaming the other gender and as for now, how are we going to support or give hands to women who are still deprived of their rights. Let this era change this saying. As a woman, let us help all women to overcome the troubles they face each day and make them understand that they are mentally strong. Each and every time it is some bad cause that throws a spotlight on women and women empowerment. For a change let a positive thought of bringing up women under a wrong shadow be incarnated in the heart of each and every women. let our hearts be directed in doing our best in the upbringing of our gender.

SISTERHOOD - For the safe society

"Sisterhood is not a trite word we throw around. It should be based on how you would want to be treated if you were walking in her shoes."

We women often face barriers with respect to gender in every field we go which is inevitable. It's hard for us to break this glass ceiling at times and is inexplicable about what we are going through. The only help you can receive is from sisterhood which is the stereotyped word. But according to the survey, most of the females felt that "currents of malice and negative emanating are from other females".Almost 85% of those who took part in the survey admitted having suffered serious, lifealtering knocks at the hands of other women. More than 75% had beenhurt by the jealousy and competition of a friend. This makes us feel that women are their worst foes as per the study which we need for a safe and sound society.

As Bell Hooks mentions, the difficulties that prevent women from a true Sisterhood and political solidarity are; sexism, racism, and classism. And we are taught that women are "natural" enemies that solidarity will never exist between us because we cannot, should not and do not bond with one another. This made us believe that we cannot get along with each other which isn't true. When the female can unite to oppress someone they hate why not be a game-changer regarding this.

True sisterhood cannot be forced, that has to be developed with interest, patience, reciprocity, and overtime. Every woman cannot be in your friend circle or think alike but they deserve your respect and support if you can provide. Sisterhood transcends and it transforms us for the better. The truth is, many women despite our achievements or power are just too scared, too selfish, or too insecure to help other women. And that is what real "sisterhood" is all about because the reality is if we don't help each other, who will? And if not at this time, when? It begins with me and with you, right here and right now. Let's make the difference.

"Love is the essence of being a woman. We must be that light of love that seals the bond and unique beauty of our sisterhood." -Bindu

Functional Safety for FOTA (Flash Over-The-Air)

Abstract:

Imagine updating our automotive microcontroller units as we do for the applications on our phone. This is becoming a reality with the advent of FOTA. This feature enables the update of the software of an ECU without the driver having to take the trouble to visit the nearest garage, and in some cases, even without his/her knowledge. This is proposed to be achieved through the diagnostic ecosystem that the OEMs have invested heavily upon but requires the standalone control unit in the vehicle to be capable of mimicking the functionality of a Diagnostic tester/PC in the garage with its own diagnostic computing capabilities.The quantum of other possibilities achieved through the same window is huge, to say the least; as the same facility can be used to promote other features like calibration updates over the air, remote diagnostic troubleshooting by the OEM backend, preventive diagnostics and real-time data sharing through IoT cloud which could be the bread and butter to create the environment for Automated driving. The perspective of this articleis the functional safety of any automobile ECU for the mentioned feature. The nature of FOTA allows different connected services which are of different functional safety impacts. For example, the updating of non-safety relevant delta updates can happen even when the vehicle is fully operational. But for the connected service where the implementation is of any safety integrity concern (Eg. update of the whole application software or safety-relevant calibration parameter), it is crucial to detect the safe state of the vehicle lest it may lead to the malfunction of the control unit to violate safety goal. In most cases, the update of the software is done by the bootloader and hence the application-level runtime software is in no position to take charge until the full operation is completed. Incapacitating the application software during runtime can lead to catastrophically dangerous situations. So several parts of the connected services have to be ASIL rated to prevent the violation of safety goal. To summarize, the detection of a safe state for an ASIL relevant connected service implementation is the concern of functional safety.When the vehicle is not in "safe state", the safety function (monitoring software) will continually decline the safety-critical OTA request by the gateway ECU.

Keywords: Automobile, Functional Safety, Safety goal, Over-The-Air update

Abbreviations: ECU – Electronic Control Unit, ASIL – Automotive Safety Integrity Level, OEM – Original Equipment Manufacturer.

Did I ?

Its last week of 2019,we are stepping into 2020.The number 2020 sounds too familiar ? It's the magic word that was used to inspire us in childhood. Now the question arises, are we really stepping up into the Utopia we imagined? Are we really fulfilling the dreams of our nation's architects? Rewinding back to 1947, India was dreamt as an utopia for people of all sorts and religions, sharply differing from its counterpart Pakistan which went into religious extremism. Our leaders lay upon few fundamental duties on our citizens to achieve this goal. Most important of them all are Secularism, Scientific Temper, Equality and Fraternity. It's been 73 years since independence. We still suffer from religious and caste riots, clearly showing that we haven't fulfilled our fundamental duty of secularism and Fraternity. Next up, we have the term scientific temper which essentially means promoting scientific way of thinking among people to be devoid of superstitions. We have achieved scientific temper on paper but not on reality. India has been producing lakhs. of engineers and thousands of doctors every year. Despite having the numbers, have we actually innovated? Did we develop our capability of producing our own technologies? Nearly every product is manufactured in China with patents from EU and US. The point where we fail and they succeed is Creativity and freedom of ideas. We produce engineers with no individuality. The lack of such aspiring engineers was felt during the rescue of the child from bore well.

Indians are famous for their "jugaad" (khw;wpnahrp)in Tamil) which essentially means solving problems with limited resources. It would be so useful in our future of constrained resources. The question is "will we do it?". Next up is Equality, our constitution provides necessary framework for upholding equality in society. The problem we face is implementation. The biggest problem we face is non compliance with rules. Its not something only few do but literally everyone. How many times did we decide not to wear helmets? How many times did we didn't wear seat belts or drive within speed limit? A leader is formed from the society. When the society is corrupt, they will get only corrupt leaders. The change starts from within. Only then do our dreams of super power will come true. Next time you complain about corrupt government, laws and deteriorating life standards, Ask this question to yourself .

STAY BLESSED

Most of the days we run across to establish our life time achievements and accomplish our goals. We fail to realize for what we are running across and try holding judgmental scores and forget to live happily. Once there were few friends hosting a small alumni meet in their favorite teacher's house. After very long years they meet they were so excited to share their achievements and greet each other for their achievements. It was a very proud moment for most of them and envying for few as usual. There is always a point of saturation. The same way they slowly diverted their conversation to work life balance and their struggles and causes. They started to blame the system, family, responsibilities etc. The teacher was listening to everything and at times participated in their conversation too.   He offered all of them beverages in different cups. They served themselves based on their status and they were very keen in establishing their status in picking up the beverages. The high priced cups were moving very fast, the teacher started his conversation:

Many of you picked the expensive cups first and you did not even bother to see what was served inside it. The expensive cups did not add any taste to the drink served inside. It just holds the drink. We all were in need of drink to taste, but if you notice in this stage you forgot that and you all picked the cups which were more expensive to establish your richness and status. Think life is just like the beverage served; the cup is the status and richness. Please understand the cup in which we drink will not change the taste of our life means the quality of our life. Many times we concentration on the cup and we compromise our quality of life.

Please know to enjoy God has given a place to work, salary to pay for our expensive, family to bother for us. Why to run and establish our bigness?

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PERFECTION THROUGH PERFORMANCE