

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CYBERLINES

VOLUME : 10

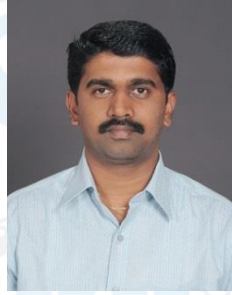


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March 2018 released

EDITOR'S DESK

From the Chief Editor Desk...



It gives me immense pleasure to bring out the issue of our magazine "CyberLines" as the name itself symbolize it marks the whole-time line of our department of Computer Science and Engineering.

The main motto of bringing out this magazine is to show the surrounding, our achievement, work and contribution to the society for every academic year. The magazine reveals all the hard work of our students, their extracurricular activities, and we complement their hard work under the winners and toppers in this magazine, and I am quite happy in sharing these details with the Heads of the Departments, our well-wishers and all others who are bonded to CSE, through this magazine.

This magazine is also for us to look back to the past, the path we traveled together as a unit. The support we got from our colleagues and subordinates. It reflects our complete journey of the past year. It gives us time to think about our beloved passed out students, and wish them all success in the corporate life they are undergoing now. The current volume has come out well, and the work from our students has made it more colorful. We hope our forthcoming volume will be enriched with more delightful incidents, ideas and thoughts to share.

With Regards
Dr.S.Shankar
Head of the Department

From the Editor...

It was a great pleasure for me working on this magazine along with the student members of our Editorial Board. While

collecting the states and details for this year's magazine, I got the opportunity to find few young talents of our department. I was happy to know that apart from the Academic field, our students have also shown many interests in other fields and also in the development of our college. They were keen in the development of this magazine and all other activities related to its publishing Glad to work with you guys. The current volume has come out well and it will be still better in the following years.

With Regards
Prof.D.Magesh, AP/CSE

THE CYBER LINES

Computer has become the part of our life. The work of a computer engineering is not only restricted to the field of IT, their job continues even outside that, like Automobiles and many other fields. The department of Computer Science and Engineering is linked and synchronized with all other department of Engineering. Hence the world moves ahead along with us!

Our Mission

To prepare the students to become computer science professionals at par with the current trends technology and to mold them to attain excellent leadership qualities thereby making them component in the hardware, software and research arena.

Our Vision

To provide an excellence for individuals to develop technologically superior, socially conscious and nationally responsible citizens.

The Department of Computer Science and Engineering was established in the year of 2000 with a mission of preparing the students to become computer science professionals at par with the current trends in technology and to mount them to attain excellent leadership qualities thereby making them competent in software, hardware and research arena. The department offers B.E and M.E programmes. The department is permanently affiliated to Anna University, Chennai and accredited by NBA.

The Department has signed MoUs with organizations like Infosys, Sun Microsystems, Sutherland Global Services, PT Education, BSNL, Cisco Networking (CCNA), HCL Info systems, RED HAT Linux, Techno park, UTL Technologies etc., to promote Industry – Institute Interaction for the benefit of students and faculty.

CSE Department has been recognized as research centre by Anna University, Chennai. The Department has highly qualified, committed and research oriented faculty members and 3 Anna University recognized supervisors.

Department Achievements:

Department received Best Accredited Student Branch Award and Longest Student Branch Award from Computer Society of India (CSI) since 2014.

I. Programmes and seminars organized by the Department.

1. Faculty Campus Connect program on "Problem Solving using PYTHON Programming has been organized in collaboration with Pearson and CSI.
2. One day seminar on Unlocking the Creative Mind and Cognitive Security DataCamp was conducted on 23 September, 2017. The session was handled by Mr.Prem Ananth, CTO & Entrepreneur and Prasanna.S, Ethical Hacker at Rethink Passion, Bangalore.
3. National level hands-on workshop on "Android-Mobile Application Development" was conducted on 5th and 6th of January 2018. It was conducted by Mr.Aravindhan R, Senior Android Developer in Care Soft Global Pvt Ltd, Pollachi.
4. One day guest lecture on the topic of Data Science and Data Analytics, was organized on 2nd February, 2018. The guest lecture was handled by Mr.Karthik Veer, Chief Data Scientist, D Square Consulting.
5. Cyberknots'18 is a National level technical symposium was conducted on 10.02.2018 the Department of Computer Science and Engineering. The symposium was inaugurated by chief guest Mr.Manuraj Rajamanikandan, Non-Functional Consultant and honourable alumni of HICET, Cognizant Technology Solutions, Cohin, Kerala.
6. One day guest lecture on Higher studies and opportunities in abroad was conducted on 20th January 2018. It was carried out by Ms.Deepa Srinivasan, Branch Head, IDP Education Pvt Ltd., Coimbatore.

The Gallery

IV. Paper publications by faculty and students:

1. Paper Publications by Faculty Members

S.No	Academic Year	Int/National Conferences	Int/National Journals	Total
1	2017-18	4	9	13

2. Book Publications by Faculty Members:

1. Dr. N.Sengottaiyan & Ramya Aravindhnan, "Computer Programming", Cengage Publications India Ltd, 2017.
2. Dr. N.Sengottaiyan, Dr.K.Deeba & G.Mehala, "Computer Programming Lab Manual", Pearson education Ltd, 2017.

3. Paper Presented by Students:

S.No	Academic Year	Int/National Conferences	Int/National Journals	Total
1	2017-18	21	-	21

V. List of students Co-curricular/extracurricular activities:

S. No	Academic Year	Seminar/workshop
1	2017-18	144

1. Joshua J Kannat from III CSE A won First Prize in Project Presentation held at Amrita University.
2. Joshua J Kannat from III CSE A won Second Prize in Paper Presentation and awarded a cash prize of Rs1000 held at Karunya University.

The Fine Memories of 2017-2018

One day Seminar on "Cognitive Security Data Camp" dated 23rd September 2017

Coordinators:

Mr.B.Dhiyanesh, Assistant Professor, Department of Computer Science.

Hindusthan Developers Club



One day Seminar on "Cloud Computing" dated 30th December 2017

Coordinators:

Ms.K.Ramya, Assistant Professor, Department of Computer Science and Engineering.



HINDUSTHAN

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EXTRA CURRICULAR ACTIVITIES

Two-day Workshop on “Android Based Mobile Application Development”

Dated 5th and 6th January 2018

Coordinators:

Ms.K.Ramya, Assistant Professor, Department of Computer Science and Engineering.



Manimaran G III year CSE student secured Third place in long Jump in Anna university zone 10 Intercollegiate Athletics meet at Sri Krishna College of Engineering and Technology on October 2017.



Naveen J from III year CSE and Santhosh from IV year CSE won the First position in Anna University Zone 10 kabaddi match at SVS College of Engineering on September 2017.



Anna University Zone 10 Hockey Match held at Dr.Mahalingam College of Engineering on August 2017. Our Computer Science Department III year student Ruben Raj and second year student Pandian secured second position in the event.

One day National Level Technical Symposium CYBERKNOTS'18 on 10th February 2018





Anna university Zonal Tennis match held at Hindusthan College of Engineering and Technology on September 2017. Our Computer Science Engineering Department's III Year student Vigneshwaran R secured First place and Centeis Fourth place



Sowmiya B and Thembavani E from III year CSE got First prize in Anna University Zonal Basket Ball and secured III position in KCT Trophy and National level runners in Pits trophy.



Vicaran R of III year CSE got First prize in Meme contest held at Coimbatore Institute of Technology.



Vasantha Kumar of III year CSE got Third prize in solo singing contest in Hinspire'17 on March 2017.

Placed Students

KGISL, Coimbatore



Akhila Sree Ramaswamy



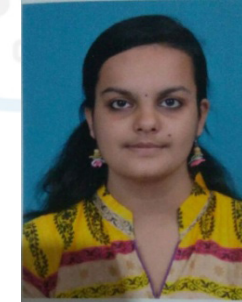
Dharani M



Juanita Jeyabalan



Logeshwari S



Radhika Vijay



Rajpriya M



Ravikiran S



Sree Nandhini S



Varna D

Ugam Solution, Coimbatore



Prajeesh Kannan C



Sourish Chandran



Suruthi K



Yamini C

Hakuna Matata, Chennai



Ezhil Rachel M

Maventic Innovative Solutions Pvt Ltd, Bangalore



Sibi Shankar S

KGISL, Coimbatore



Bala Murugan C



Calvin Joe S S



Logeshwar S



Venkatesh R

Amazon



Dharani M



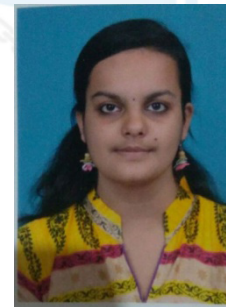
Juanita Jayabalan



Keerthana R



Logeshwari S



Radhika Vijay



Rajpriya M



Yazhini M



Zaidh Ahamed M

Neyamo Enterprise Solutions Pvt.Ltd



Akhila Sree Ramaswamy

ILM Pvt.Ltd



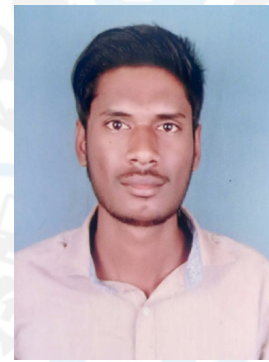
Adithya MRP



Alhar S



Anuja S



Gobinath S



Harikumar A



Kalaiarasan L



Kovarthan M R



Neela N G



Pradeep Kumar S



Ragul N



Jaiwin Sam F

Cognizant Technologies



Calvin Joe S S

CG-VAK Software and Export Ltd



Kunal R

Klikx Software Solutions



Varna D

Solver Minds



Ramya R



Praveen Kumar M

CLASS TOPPERS LIST(2017-2018)

FINAL YEAR

Vuram Technologies, Chennai



Sooraj P



Akhila Sree Ramaswamy
CGPA:8.87



Sruthi.K
CGPA:8.325



Priyadharshini.D
CGPA:8.24

N Dot Technologies, Coimbatore



Priyadharshini D

Mindnotix Technologies, Coimbatore



Bala Ventakesh T



Mohamed Yasar M



Naveen K



Vigneshwaran N

THIRD YEAR



Pavithra Vikashini.N
CGPA:8.21



Aarthi.R
CGPA:8.15



B.Sowmya
CGPA:8.00

SECOND YEAR



Preethiba.I.B
CGPA:9.28



M.Janasri
CGPA:9.21



Vauhini.S
CGPA:9.2

FORTH COMING EVENTS

S.NO	TITLE OF THE PROGRAM	TENTATIVE DATE
1	International Conference on Green Computing	May 2018
2	Association Inauguration	July 2018
3	Two Day workshop	July 2018
4	National Level Seminar	July 2018
5	Two Day hands-on Python workshop	August 2018
6	Guest Lecture	September 2018
7	Two Day National Level Workshop with hands on Training	October 2018
8	One Day workshop on Voice bots	October 2018

MOTHER

M-Mightier than the oceans depth is mother's love.
 O-On the whole earth no one cares for me like her.
 T-Tender and strong is her stride towards me.
 H-Heart in heart I thank lord for this.
 E-Enlightening my life is her only goal.
 R-Reality, sacrifice is the other name for MOTHER.

-AKHILA SREE RAMASWAMY.
 IV-CSE A

TECHNOCREATORS

We the one who has the superpower of comprising TECHNOLOGY in our FINGERTIPS
 We the one who knows to reframe TECHNOLOGY, from MACRO to NANO
 We the one who can handle both HIGHER LEVEL LANGUAGE, and ASSEMBLY LANGUAGE
 We the one who knows to create a PROGRAM, and handle FUNCTIONS
 We the one who use POINTERS for ADDRESSING
 We the one who knows to use CONSTRUCTOR, and where to use DESTRUCTOR
 We the one who knows to create a BUG, and can also DEBBUG
 We the one who compress HARDWARE and SOFTWARE into BRAINWARE
 We the one who handles problem by RESTARTING, not by SHUTDOWNING
 For the HARDWORK we use our SOFTSKILLS, We are so called as SOFTWARE ENGINEERS.

Afreen Fathima.A

மொபைல் (கைப்பேசி)

நீ எவர் துணையையும் தேடி அலையவேண்டாம்
நான் இருக்கும் வரை
காதல் என்னும் வார்த்தைக்கு இக்கால
இளைஞர்களின் தூதுவனாய் விளக்குகிறேன்
பலரின் உணர்வுகளை வெளிப்படுத்தும்
கருவியாக விளக்குகிறேன்
நீ மறந்தாலும் உன்னுடைய மறக்க முடியா
தருணங்களை உனக்காக நான்
புகைப்படமாய் சேமித்து வைக்கிறேன்
உன் பொழுதுகளை பல வழிகளில் கழிக்க
நான் பல பொழுதுபோக்கு செயலிகளை
உள்ளடக்கி வைத்திருக்கிறேன்
இணையம் என்னும் இன்பினிட்டி உலகை
சின்னஞ்சிறு செவ்வகப் பேழைக்குள் அடக்கி வைத்திருக்கிறேன்
நிழலைப் போல பிரிக்கமுடியா பிம்பமாய்
உன் உள்ளங்கை அரவணைப்புக்காக ஏங்குகிறேன்
காலத்தின் கற்பனையால் கருவாய் உருவாகி
பின் மனித உழைப்பிற்கு மகனாய் பிறந்த
எனக்கும் பெயர் சூட்டினர் மொபைல் என்று

கௌதம் ரவிச்சந்திரன், IV BE CSE

கடவுளும் அன்பும்

அண்டம் என்னும் உயிரில்லா கூட்டில் ஒன்பது
முட்டைகளையிட்டு அதில் மூன்றாவதாய் இட்ட
பூமி என்ற முட்டைக்குள் ஒரு உயிருக்கு பதில்
பல உயிர்களை படைத்தது உமதுசெயலாம்
பிறப்பு எனும் மாய செயலுக்கு சொந்தக்காரனாம்
இறப்பு எனும் காலத்தின் மறுசுழற்சிக்கு நாயகனாம்
உயிரில்லா படைப்புக்களை பல படைத்து
அவற்றிற்கு வண்ணங்கள் கொண்டு உயிர்பித்தது
உமது கற்பனையாம்.....
உயிர்களில் இருவகை கண்டாயாம் அவற்றை
ஐந்து ஆறு என அறிவைக் கொண்டு பிரித்தாயாம் !
ஐந்தறிவோ அனைத்தையும் அறிந்து
அன்பு பாராட்டி நேசிக்கத் தொடங்கியதாம் !
ஆனால் ?
ஆறறிவோ பகுத்தறிவை பயன்படுத்தாமல்
உயிரில்லா உம்மை ஐந்தறிவின் பார்வையால்
பாலைவனத்தில் காணப்படும் கானல்நீர் போன்ற
உமக்கு கடவுள் என்று பெயர் சூட்டி கண்களுக்கு
தெரிவதை நேசிக்க மறந்து உம்மை நேசித்ததாம்
சிவமே அன்பாம் !

கௌதம் ரவிச்சந்திரன், IV BE CSE

காதல் கணினி

என் இனிய கணினியே !

நான் இவ்வளவு நேரம்

யார் முகத்தையும் தொடர்ச்சியாக பார்த்ததில்லை

என் விரல் யாரையும் இப்படி தீண்டியது இல்லை

என்ன மாயம் செய்கிறாய்

இந்த உலகை உன் மென்பொருட்களில் ஒரு மையமாக்கி

உன்னால் என்ன செய்ய முடியும் என்ற காலம் போய்

உனக்கு என்ன வேண்டும் என்று வியக்கவைத்தாய்

என்னவோ உன் திறமையில்

மனிதனின் மூளையை மங்கச்செய்து

மனிதனின் அடையாளமாகினாய்

அப்துல் , III BE CSE

என் இனிய கணினியே !

இவ்வளவு நேரம் தொடர்ச்சியாக

நான்

யார் முகத்தையும் பார்த்ததில்லை

இவ்வளவு நேரம் யாரோடும்

விரல் தீண்டல் தொடர்ந்ததில்லை

அதெப்படி

உன்னால் மட்டும் முடிகிறது?

கண்ணுக்குத் தெரியாத

கணிதச் சுருக்கங்களின் சுருக்கெடுக்க ?

முகம் மனதின் கண்ணாடி

என்பது

முகமே கண்ணாடியாகிப் போன

உன்னிடம் தானே உண்மையாகிறது

பொழுதுகள் மாறினாலும்

முகங்கள் மாறினாலும்

விடைகளை மாற்ற மறுப்பது

நீ மட்டும் தானே

நீ மட்டும் இல்லையென்றால்

உலகம் ஒருவேளை

காகிதக் கட்டுக்களில்

புதைக்கப்பட்டிருக்கலாம் ?!

நீ மட்டும் இல்லையென்றால்

உலகைப் பிடித்தெடுக்கும்

ஓர் வலை

உருவாகாமலே போயிருக்கலாம்

நீ என்ன செய்யாய் என்று கேட்ட காலம்

போய்விட்டது

என்ன செய்ய மாட்டாய் என்கிறது

கலியுகம்

யாரோ பகல் கனவு கண்டால்

அதை

பிரதி எடுத்துக் கொடுக்கிறோம்

இரவு கனவை இரவல் வாங்கி

மென்பொருளாய் மொழி பெயர்க்கிறாய்

இப்போதெல்லாம் மனித மொழிகளுக்கிங்கே மரியாதை இல்லை

கணினி மொழிகளுக்குத் தான்

உலக அங்கீகாரம்

என்ன.....???!!!

விரல்களால் பேச வேண்டும்

அது ஒன்று தான் வித்தியாசம்!!!!

சில ஆண்டுகளுக்கு முன்பு உலகம் உன்னை ஆண்டுகொண்டிருந்தது

இப்போது

நீ ஆட்சியைக் கைப்பற்றி விட்டாய்

மிட்டாய் கடைகளின்

இனிப்புக் கணக்குகள் கூட

நீ இல்லையென்றால் கசந்து போகிறது

ஏனென்றால்

எங்கள் மூளைக்குச் செல்லும்

முக்கால் வாசி நரம்புகளும்

இடம் பெயர்ந்து விட்டது

எங்கள் மானிட சமூகம்

வைரஸ் விநியோகம் செய்வது

நோய் தருவதும் மருந்து தருவதும்

நாங்கள் என்பதை

நீ

மறந்துவிடாமல் இருக்கத்தான்

காலம் மாறிவிட்டது

முன் கலப்பை இருந்த இடத்தில்

இப்போது கணிப்பொறி

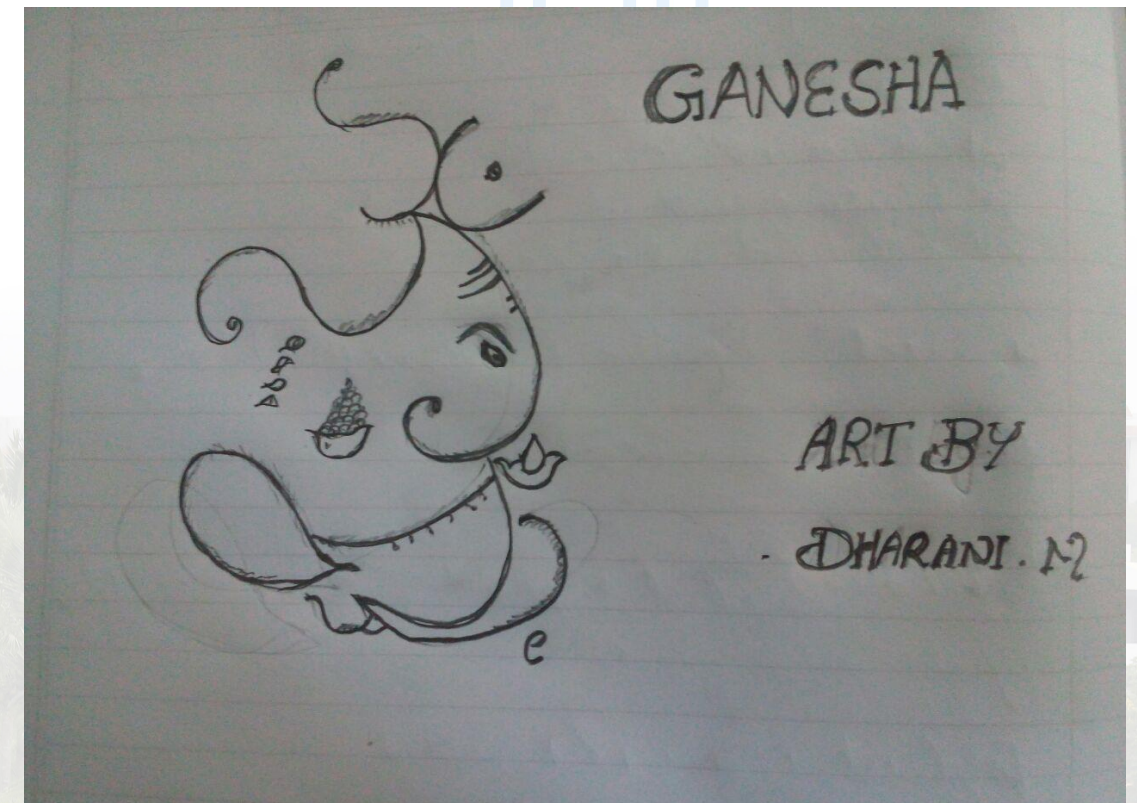
முன் வரப்புகள் இருந்த இடத்தில்

இப்போது வன்பொருள்

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R. ஸ்வாதி, IV BE CSE





SKILLS OF THE FUTURE

10 SKILLS YOU'LL NEED TO THRIVE IN 2020

WHAT IS THE FOURTH INDUSTRIAL REVOLUTION?

The Fourth Industrial Revolution builds upon the innovation of the Third Industrial Revolution to revolutionize industries all over the globe such as:

- ✓ Artificial Intelligence
- ✓ Internet of Things
- ✓ Self-driving Vehicles
- ✓ Nanotechnology
- ✓ Renewable Energy
- ✓ Quantum Computing
- ✓ Biotechnology

Because of this explosion of new fields, new markets will emerge which will require a new set of skills for employment. Increasingly smart robots will take over some jobs, and jobs that didn't exist before will be in-demand.

WHAT ARE THE TOP 10 SKILLS YOU'LL NEED TO THRIVE IN 2020?

1 Complex Problem Solving

The skill to see relationships between industries and craft creative solutions to problems that are yet to appear is a must to keep up with AI machines.



2 Critical Thinking

People who can turn data into insightful interpretations will be sought after due to the complexity and interconnectedness of various fields like computer science, engineering, and biology.



3 Creativity

The quality of randomness and the ability to build something out of ideas is a skill that will pay off now and in the future.



4 People Management

Robots may acquire analytical and mathematical skills, but they can't replace humans in leadership and managerial roles that require people skills.



5 Coordinating with Others

Effective communication and team collaboration skills will be a top demand among job candidates in any industry.



in any industry.

6 Emotional Intelligence

Qualities that relate to emotional intelligence such as empathy and curiosity will be a big consideration factor for hiring managers of the future.



7 Judgment and Decision-Making

The ability to condense vast amounts of data, with the help of data analytics, into insightful interpretations and measured decisions is a skill that will be useful in the information age.



8 Service Orientation

People who know the importance of offering value to clients in the form of services and assistance will be in demand as businesses would want to provide solutions to the problems of society.



9 Negotiation

The ability to negotiate with businesses and individuals to come up with a win-win situation is a skill that will be needed to survive in affected industries.



10 Cognitive Flexibility

The ability to switch between different personas to accommodate the challenge at hand will be important to be successful in combined industries.



WHAT ARE THE TOP 5 INDUSTRY SECTORS IN 2020?



1. Technology and Computational Thinking



2. Caregiving



3. Social Intelligence and New Media Literacy



4. Lifelong Learning



5. Adaptability and Business Acumen

WHAT WILL BE THE 10 MOST IN-DEMAND JOBS IN 2020?



1. Data analysts



2. Medical technicians, physical therapists, and workplace ergonomics experts



3. Sales and Marketing Specialists



4. Customer service representatives



5. Management analysts



6. Software developers and computer programmers



7. Veterinarians



8. Product designers and creatives



9. Teachers and trainers



10. Accountants and auditors

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UNDERSTANDING MACHINE LEARNING

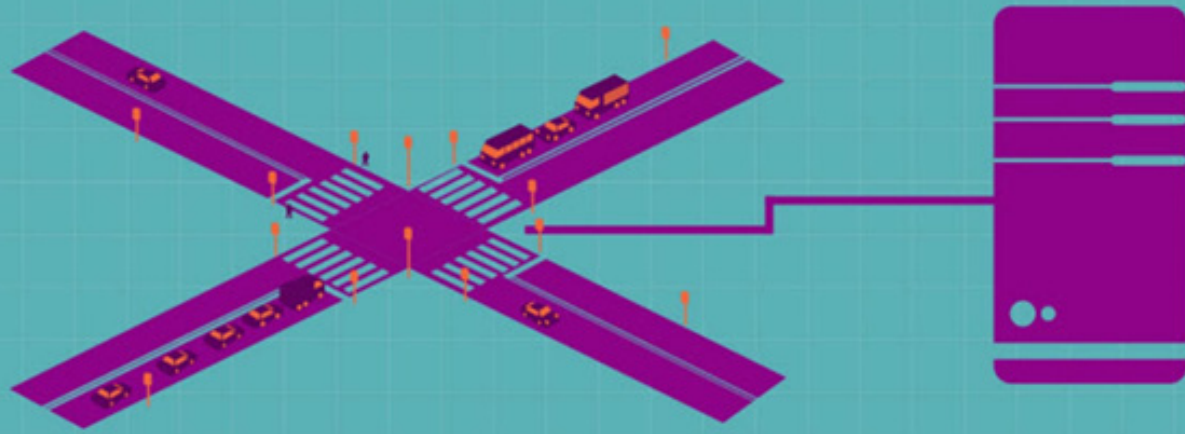
We now live in an age where machines can teach themselves without human intervention. This perpetual self-education can produce insights that are helpful in making proper and productive decisions for us across a variety of fields, from medicine to interstellar space travel. Let's take a look at what Machine Learning is, how it works, and how it will change the world we live in.

MACHINE LEARNING DEFINED

"A field of study that gives computers the ability to learn without being explicitly programmed."

Arthur Samuel, machine learning pioneer

WHAT IT IS



Machine learning (ML) deals with systems and algorithms that can learn from various data and make predictions. An example is predicting traffic patterns at a busy intersection—a program can run a machine learning algorithm containing data about past traffic patterns and, having “learned” previous data, it can devise better predictions of future traffic patterns.

Other examples of real-world scenarios that ML can target and tackle:

Is this cancer?



Which of these people are good friends with each other?



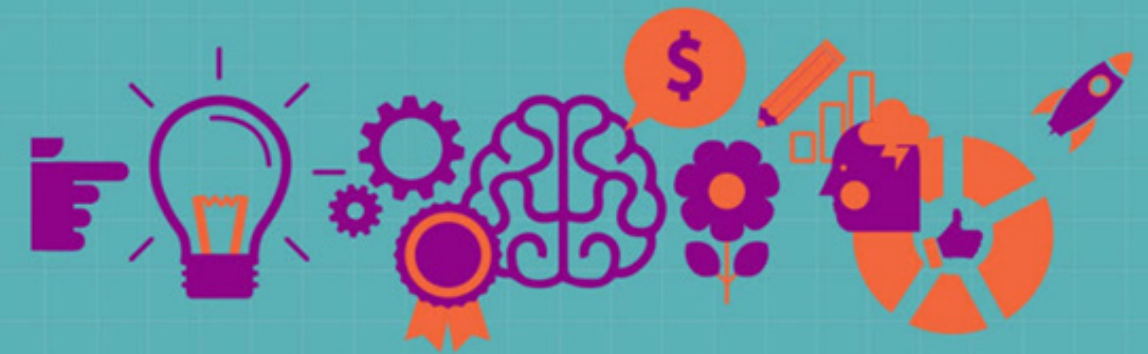
Will this rocket engine explode on takeoff?



How do you fly this thing?

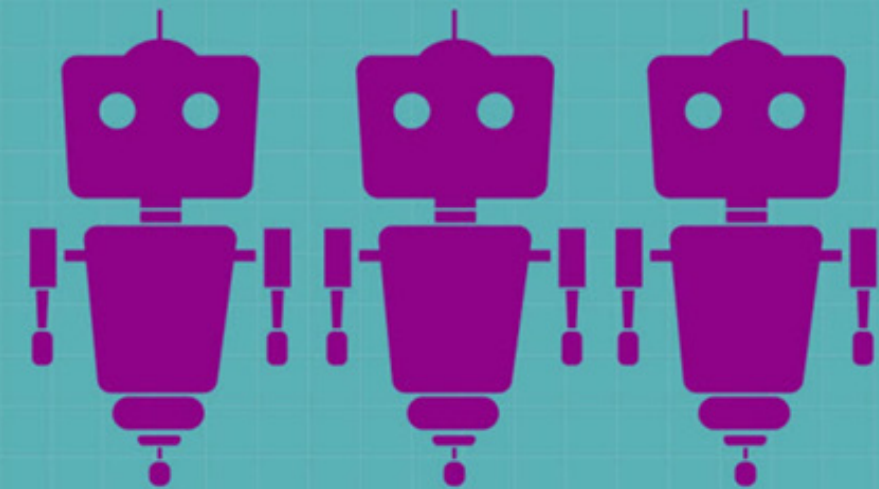


THEORY



The main goal of a learner is to generalize, and a learning machine able to do that can perform accurately on new or unforeseen tasks. The goal for the learning machine is to mimic human cognition by creating a generalized model to produce precise enough predictions.

HISTORY



ML grew out of a branch of artificial intelligence that studies pattern recognition and computational learning. It is a subfield of computer science.

In the early days of AI, researchers were very interested in machines that could learn from data. But ML's increased focus on a logical, knowledge-based approach occasioned a split from AI in 1980. Statistical-based research, probabilistic reasoning, pattern recognition and information retrieval came into the fold of ML; by the 1990s, ML became a separate field altogether, and began to flourish by shifting its goal from achieving AI to tackling practical problems.

HOW IT'S DONE

All ML tasks can fit into several categories. Here are the main ones:



Dog



Not a Dog

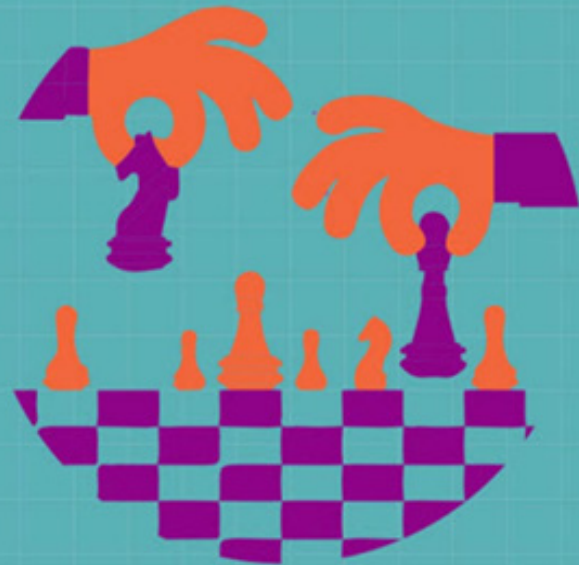
Supervised ML - relies on data where the true label is indicated. Example: teaching a computer to distinguish between pictures of cats and dogs, with each image tagged "cat" or "dog." Labeling is normally performed by humans to guarantee high data quality. Having learned the difference, the ML algorithm can now classify new data and predict labels ("cat" or "dog") on previously unseen images

Unsupervised ML - deprives a learning algorithm of the labels used in supervised learning. Usually involves providing the ML algorithm with a large amount of data on every aspect of an object. Example: presented with images of cats and dogs that have not been labeled, unsupervised ML can separate the images into two groups based on some inherent characteristics of the images.



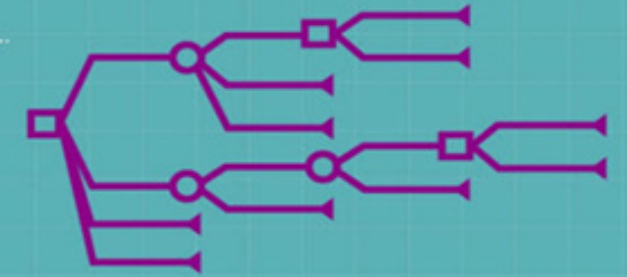
80%
Chance = Dog ✓

Reinforcement Learning - Example: learning to play chess. ML receives information about whether a game played was won or lost. The program does not have every move in the game tagged as successful or not, but only knows the result of the whole game. The ML algorithm can then play a number of games, each time giving importance to those moves that result in a winning combination.

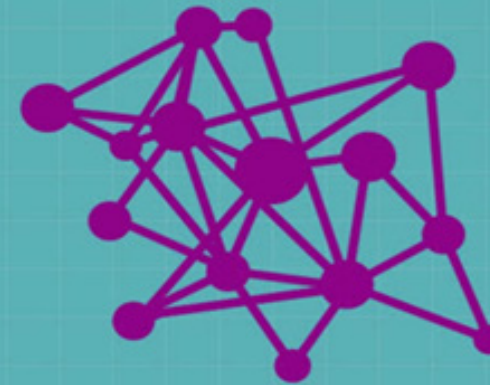


APPROACHES

There are over a dozen approaches employed in ML. Some of these include:



Decision Tree Learning—a predictive model that maps observations about an item to draw conclusions about its target value.



Artificial Neural Networks—a learning algorithm, inspired by biological neurons, that uses statistical data modeling tools to find patterns in data.

Deep Learning—consists of multiple hidden layers in an artificial neural network to model the way the human brain processes light and sound into vision and hearing; modern computer vision and speech recognition software are products of deep learning.



Bayesian Networks—a probabilistic graphical model that represents a set of random variables and their conditional independencies; e.g., the probabilistic relationships between diseases and symptoms.

*"Humans can typically create one or two good models a week; machine learning can create thousands of models a week."
Thomas H. Davenport, analytics thought leader*

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