

7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust

Sr. No.	Description	Page No.
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3	Document of collaboration with Bennet University	15



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EY Techathon 2021: Winner from your college

1 message

EY Techathon <techathon@in.ey.com>

To: "tsec.placement@gmail.com" <tsec.placement@gmail.com>

Cc: Ovi Patel <oveshpatel16@gmail.com>

16 February 2021 at 11:21



Winner from your college!

We are delighted to share that this year's edition was won by team Insane Coders from your esteemed college. The 4 member team of Oveshahmed Patel, Janhavi Zarapkar, Mohnish Nathani and Girish Salunke submitted a comprehensive technology solution for enabling vaccine provenance using Blockchain and increasing vaccine adoption through Gamification.

The Jury comprising eminent industry leaders from the fields of technology, public health and health sciences especially commended the thought and technologies in their solution presentation.

We hope that the students enjoyed the experience and found it to be of value. We will remain in touch with the winners and look forward to continue to engage with your college.

Technology Consulting

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7.3 Institutional Distinctiveness

Details of Patent by Students:

Sr. No	Details
1	Patent Details of Year 2018
2	Patent Details of Year 2019



3

Patent by Students Year 2018





TSEC THADOMAL SHAHANI ENGINEERING COLLEGE

Sr. No.	Year	Name of Faculty / Students	Department	Title	Application No. & Date	Date of Publication
1	2018	Dr. G T Thampi	Information Technology	Framework and process for various learning styles and learning abilities using customized instructional or learning content.	Application No.201821008914 A Date of filing of Application :12/03/2018	Publication Date: 03/01/2020
2	2018	Dr. G T Thampi	Information Technology	Framework and methodology for forecasting life cycle of digital computational and communication technologies.	Application No.201821008917 A Date of filing of Application :12/03/2018	Publication Date: 03/01/2020
3	2018	Dr. G T Thampi & Dr.Madhuri Rao	Information Technology	Intuitive Graphical User Interface Design of E- commerce using Cognitive Computing Framework	Application No.201821007909 A Date of filing of Application :03/03/2018	Publication Date: 16/03/2018
4	2018	Dr. G T Thampi & Dr.Darshan Ingle	Information Technology	Self Learning Systems and Techniques for predicting Traffic patterns	Application No.201821041086 A Date of filing of Application :31/10/2018	Publication Date: 01/05/2020



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application: 12/03/2018

(21) Application No.201821008914 A

(43) Publication Date: 03/01/2020

(54) Title of the invention: FRAMEWORK AND PROCESS FOR VARIOUS LEARNING STYLES AND LEARNING ABILITIES USING CUSTOMIZED INSTRUCTIONAL OR LEARNING CONTENT.

 (51) International classification (31) Priority Document No (32) Priority Date (33) Name of priority country (86) International Application No 	:H04N 7/00 :NA :NA :NA	(71)Name of Applicant: 1)DR. THAMPI GOPAKUMARAN T. Address of Applicant: THADOMAL SHAHANI ENGINEERING COLLEGE, P. G. KHER MARG, TPS III, OFF LINKING ROAD, BANDRA (WEST), MUMBAI-400 050, MAHARASHTRA, INDIA. Maharashtra India
Filing Date	:NA	2)DR. ADAMUTHE AMOL CHANDRAKANT
(87) International Publication No	: NA	(72)Name of Inventor:
(61) Patent of Addition to Application Number	:NA	1)DR. THAMPI GOPAKUMARAN T.
Filing Date	:NA	2)DR. ADAMUTHE AMOL CHANDRAKANT
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

The present invention relates to digital communication and computational technologies driven processes in the realm of education and training of human capital. More specifically the present invention relates to mass customization of learning content/instructional content based upon cognitive load theories underpinning cultural and historical conditioning of learners of different nation states/market place/geographical entities in which learners brought up. The pervasive ubiquitous Information Communication Technologies are getting leverage to create massively customized learning content based upon the varying learning styles and learning abilities (rate of learning/internalization). Machine learning/augmented/virtual reality techniques are used as a productive and resource & force multiplying tools to have an effective learning experience. These learning/instructional contents are offering cost and quality arbitrage in comparison with existing ICT enabled learning content and procedures in the educational/training market place.

No. of Pages: 9 No. of Claims: 9



(21) Application No.201821008917 A

(19) INDIA

(22) Date of filing of Application :12/03/2018 (43) Publication Date : 03/01/2020

(54) Title of the invention : FRAMEWORK AND METHODOLOGY FOR FORECASTING LIFE CYCLE OF DIGITAL COMPUTATIONAL AND COMMUNICATION TECHNOLOGIES.

(51) International classification	:H04W74/08H04W72/12	(71)Name of Applicant:
(31) Priority Document No	:NA	1)DR. THAMPI GOPAKUMARAN T.
(32) Priority Date	:NA	Address of Applicant :THADOMAL SHAHANI
(33) Name of priority country	:NA	ENGINEERING COLLEGE, P. G. KHER MARG, TPS III, OFF
(86) International Application No	:NA	LINKING ROAD, BANDRA (WEST), MUMBAI-400 050,
Filing Date	:NA	MAHARASHTRA, INDIA. Maharashtra India
(87) International Publication No	: NA	2)DR. ADAMUTHE AMOL CHANDRAKANT
(61) Patent of Addition to Application	:NA	(72)Name of Inventor:
Number	:NA	1)DR. THAMPI GOPAKUMARAN T.
Filing Date	.NA	2)DR. ADAMUTHE AMOL CHANDRAKANT
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

This invention is in the field of prediction and forecasting of natural life cycles of products and processes and more particularly to forecasting life cycle of technologies. More specifically the invention related to framework and methodology for forecasting life cycle of digital computational and communication technologies. More specifically the present invention is from technologist point of view where direct application of principles and theories from multiple fields of science and engineering are integrated for forecasting life cycle of technologies. It provides framework and methodology for simple, easy to use, objective and more accurate forecasting of technology life cycle.

No. of Pages: 14 No. of Claims: 7



(19) INDIA

(22) Date of filing of Application :03/03/2018

(43) Publication Date: 16/03/2018

(54) Title of the invention: INTUITIVE GRAPHICAL USER INTERFACE DESIGN OF E-COMMERCE USING COGNITIVE COMPUTING FRAMEWORK

		(71)Name of Applicant:
(51) International classification	23/00 G06T	1)Ms. Megharani T. Patil Address of Applicant :Thadomal Shahani Engineering
		College, Bandra(West), Mumbai, 400050 Maharashtra India
(31) Priority Document No	:NA	2)Dr. Madhuri Y. Rao
(32) Priority Date	:NA	3)Dr. G. T. Thampi
(33) Name of priority country	:NA	(72)Name of Inventor:
(86) International Application No	:NA	1)Ms. Megharani T. Patil
Filing Date	:NA	2)Dr. Madhuri Y. Rao
(87) International Publication No	: NA	3)Dr. G. T. Thampi
(61) Patent of Addition to Application Number	:NA	_
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

Present invention provides specially an intuitive GUI design of e-commerce using cognitive computing framework to develop a template for virtual e-commerce website suitable for heterogeneous users. The invention carried out stepwise template development for an intuitive virtual e-commerce shopping website. We began with documenting a mental model and the behavioral pattern of users and this assisted us to figure out the gaps between their current knowledge and target knowledge. Based on this understanding, design procedures were formed and eventually, those are reflected in a prototype of an intuitive virtual e-commerce shopping site. The prototype is validated with standard methods. Finally, the template is formed. The contribution of features such machine learning and artificial intelligence is shown by introducing a case study on Demographic content-based collaborative recommendation system framework, Navigation optimization through modified prefix span algorithm and Review summarization using Gibbs sampling based Latent Dirichlet Allocation classifier which have reduced human efforts and increased user satisfaction level. In this way, machine learning & artificial intelligence have contributed in designing intuitive interfaces for e-commerce shopping sites. Additional contribution to make e-commerce website more intuitive is demonstrated by another case study redesigning ICONs of an e-commerce online banking websites to make it more users friendly.

No. of Pages: 25 No. of Claims: 7



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :31/10/2018

(21) Application No.201821041086 A

(43) Publication Date: 01/05/2020

(54) Title of the invention: SELF-LEARNING SYSTEMS AND TECHNIQUE FOR PREDICTING TRAFFIC PATTERNS.

(51) International classification	:H04N (71) Name of A ₁	•
(31) Priority Document No		IPI GOPAKUMARAN T Applicant :THADOMAL SHAHANI
(32) Priority Date		G COLLEGE, P. G. KHER MARG, TPS-III, OFF.
· · · · ·		
(33) Name of priority country		D, BANDRA(W), MUMBAI, MAHARASHTRA,
(86) International Application No		DE: 400050 Maharashtra India
Filing Date	:NA 2)DARSHAN	INGLE
(87) International Publication No	: NA (72) Name of In	ventor:
(61) Patent of Addition to Application Number	:NA 1)DR. THA M	IPI GOPAKUMARAN T
Filing Date	:NA 2)DARSHAN	INGLE
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

The current road traffic estimation is swiftly done by Google maps. However, it takes into consideration only the current real-time data. This patent will facilitate the users of the country thereby reducing their traveling time. It analyzes the traffic data at the traffic signal using its microcontroller unit, GPS data and Regression using Deep Learning approach to modulate the traffic signal timers for a fine tuning the traffic. The developed system will be trained using the data from past records so that it can make decision based on past records as well as the current traffic data.



No. of Pages: 9 No. of Claims: 8



Patent by Students Year 2019





TSEC ENGINEERING COLLEGE THADOMAL SHAHANI ENGINEERING COLLEGE

Sr. No.	Year	Name of Faculty / Students	Department	Title	Application No. & Date	Date of Publication
1	2019	Dr. Ashwini Kunte	Electronics & Telecommunication	Antenna for RF Energy harvesting System	Application No201921001338 A Date of filing of Application: 11/01/2019	Publication Date: 25/01/2019
2	2019	Dr. Ashwini Kunte	Electronics & Telecommunication	Meta materials for miniaturization and Bandwidth improvement of micro strip patch antenna.	Application No.201921009985 A Date of filing of Application: 14/03/2019	Publication Date: 29/03/2019



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(12) PATENT APPLICATION PUBLICATION

(21) Application No.201921001338 A

(19) INDIA

(22) Date of filing of Application :11/01/2019 (43) Publication Date : 25/01/2019

(54) Title of the invention: ANTENNA FOR RF ENERGY HARVESTING SYSTEM

	-	(71)Name of Applicant:
(51) International classification	9/00 H01O	1)Mamta Kurvey Address of Applicant :B201, Harmony tower, Siddheshwar
	1/00	Garden, Dhokali, Thane - W. 400607 Maharashtra India
(31) Priority Document No	:NA	(72)Name of Inventor :
(32) Priority Date	:NA	1)Mamta Kurvey
(33) Name of priority country	:NA	2)Dr. Ashwini Kunte
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

An apparatus for harvesting RF energy comprising a monopole antenna, a matching network, a rectifier circuit, a storage device, wherein the antenna monopole is rectangular in shape having three steps on the upper portion, two step in the lower portion, a feedline in the lower portion which may be placed at the left, centre or right of the monopole and the monopole having transversal or longitudinal or combination of transversal or longitudinal slots either singly or in plurality. Fig 1

No. of Pages: 15 No. of Claims: 10



(19) INDIA

(22) Date of filing of Application :14/03/2019 (43) Publication Date : 29/03/2019

(54) Title of the invention : METAMATERIALS FOR MINIATURIZATION AND BANDWIDTH IMPROVEMENT OF MICROSTRIP PATCH ANTENNA.

(51) International classification	:H01Q 9/00 H01Q	(71)Name of Applicant: 1)Mrs. BHAVNA DHANANJAY THAKUR Address of Applicant:604, BUILDING-14, HIGHLAND
	1/00	RESIDENCY, DHOKALI, THANE WEST-400607,
(31) Priority Document No	:NA	MAHARASHTRA, INDIA Maharashtra India
(32) Priority Date	:NA	(72)Name of Inventor:
(33) Name of priority country	:NA	1)Mrs. BHAVNA DHANANJAY THAKUR
(86) International Application No	:NA	2)Dr. ASHWINI KUNTE
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

Provided is a microstrip patch antenna device in which an array of metamaterial dielectric inclusions comprising of complementary ELC resonators are embedded in the conductive ground plane of the patch antenna for miniaturization and bandwidth improvement of the microstrip patch antenna. The microstrip patch antenna device comprises of a dielectric substrate 102, with a upper layer of rectangular conductive radiating element 103, a lower layer of conductive ground plane 101 below the dielectric substrate, an array of metamaterial dielectric inclusions embedded in the lower layer of conductive ground plane and a microstrip feed line 104 that lies on the dielectric substrate and is connected with the rectangular conductive radiating plate. The miniaturized antenna is invented for wireless communication, especially for the Wi-Max band.

No. of Pages: 15 No. of Claims: 10





ng world

They solved for a billion.

Over 1600 students from 300 colleges participated in the EY Techathon 2021 to provide solutions using Artificial Intelligence, Blockchain and Gamification for vaccinating 1.3 billion people against COVID-19.

Winners

Insane Coders

Thadomal Shahani Engineering College, Mumbai

Runner-up

Vax India Tech

Vellore Institute of Technology, Chennai

Special jury mentions

IIT Dharwad Bestfit IIT Madras
TechHD

IIIT-Bangalore Chaos IIT Guwahati X Æ A-12

Eminent jury

R. Chandrashekhar, Jury Chairman, Former Telecom, Electronics and IT Secretary, Gol

Dr. Harish Iyer Head of Digital and Health Innovation, BMGF India **Dr. Krishna Ella** Chairman and MD, Bharat Biotech Luca Bertuccelli Director, Connected Platform Solutions, Carrier Refrigeration

Chief, Health and Development, UNDP

Dr. Manish Pant Dr. Rohini Srivathsa
Chief, Health CTO, Microsoft India

Discover ey.com/en_in/technology







THADOMAL SHAHANI ENGINEERING COLLEGE

PROJECT TITLE

Making "Deep Learning and AI skills" mainstream in India to fulfill trilateral needs of entrepreneurship, Industry-academia partnership and application-inspired Engineering Research

The objectives of the project are of great relevance to us because it is unique in its ambitions. Deep Learning, Machine Learning and Artificial intelligence are increasingly becoming the must-have skills for faculty, students and researchers in different engineering domains. Our institution is aspiring to inculcate this technology for the benefit of our stakeholders and the country.

We are pleased and excited to work with Prof. Garg for successfully executing this initiative. We understand that Bennett University has a great supercomputing infrastructure and accomplished faculty, which will of high value for this engagement.

Our faculty will get trained on futuristic technologies which in turn will help us to train our students. After that we will be able to start a research group who will follow up these activities with student projects, publications, curriculum enhancement. As there are Industry partners also in the project, so it will help us in connecting with the industry and startups to get ourselves involved in some real projects.

We will support the project in terms of manpower, local support, local hospitality and infrastructure. We will nominate five of our good faculty to get trained, set up a research group. World of opportunities will be open after this and group will flourish based on the further engagements and opportunities.









THADOMAL SHAHANI ENGINEERING COLLEGE

We will be bound by the guidelines given in the Document's sent by Project lead. Our facilities can be used to hold workshops for Tier 2 and Tier 3 Institutions to spread the learning to remote institutions of the country.

Institutional Information

Years institution has been in in existence: 35 years

Engineering courses offered in Nos (Only Number): 06

students and staff(faculty) (Only Number): 2000 (Students),

120(Faculties)

of research groups (Only Number): 03

Indicators of track record (rankings, awards etc: 2-3 Lines): Historically rated as high by various print media with respect to program accreditation, industry institute interaction, DTE compliance, University results, placement, and research based programs.

Link to website for engineering faculty: http://www.tsec.edu

Two-Three lines about the institution:

- Treating and training students as evolving human capital.
- Helping them to realize their potential.
- Facilitating and modifying different learning styles and learning disabilities.
- Perpetuating the effort to create and augment customized course content to help unleash the potential of different learners. ENG

BANDRA







THADOMAL SHAHANI ENGINEERING COLLEGE

- Our every day discourse also focuses on creating and facilitating 'Game changers'.
- We are productively researching on the ways and means of transcending technology education to help the Nation Evolve as a 'Total Solution Provider' to thrive in a carbon efficient world order.
- Facilitating them to manage their emotions to thrive in their professional life.
- Indian values driven institutional culture energizing from ancient Indus valley civilization.



MÃ

Dr. G.T. Thampi

Principal

PRINCIPAL
Thadomal Shahani Engineering College
Nari Gurshahani Marg, T. P. S. III,
Bandra (W), Mumbai - 400 050.



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