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PANIMALAR ENGINEERING COLLEGE

(A Christian Minority Institution)
Jaisakthi Educational Trust
ACCREDITED BY NATIONAL BOARD OF ACCREDITATION (NBA)
Bangalore Trunk Road, Nasarathpet, Poonamallee,
Chennai - 600 123

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

HALF YEARLY NEWS LETTER - (JAN '17 - JUNE '17)

To provide an academically conducive environment for individuals to develop as technologically superior, socially conscious and nationally responsible citizens.

Inside .....

PROGRAM EDUCATIONAL OUTCOMES (PEOs)

1. To impart and disseminate sound knowledge to the students on the fundamentals of mathematics and advanced fields of computer science and inter related disciplines to solve simple and complex engineering problems and train them to achieve sustainable growth in their professional career.
2. To enhance the ability of students to evaluate the specific requirements of software industry and provide innovative engineering solutions and efficient product designs.
3. To facilitate the students to make use of their technical competency to identify and develop appropriate product design, development, testing, maintenance, analysis of problems and provide corrective measures.
4. To enable the students to develop strong leadership qualities with aggressive optimism, multidisciplinary skills, excellent communication skills and function as effective and reliable team members giving importance to professional and ethical principles.
5. To inculcate in the students to associate in social networking, pursue continued learning of the latest developments in computer science and involve in higher research and contribute to the development of software industry and related engineering fields.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

PSO 1: To inculcate technical skills to analyze, design and implement softwares related to algorithms, networking, web services, multimedia, big data analytics and recent topics of varying complexity.

PSO 2: To develop the capability to comprehend and solve the interdisciplinary problems through appropriate technology with the understanding of contemporary business environment.

PSO 3: To develop an ability to utilize the latest technology and platforms to become a triumphant professional, successful entrepreneur and an urge for pursuing higher studies.

DEPARTMENT MISSION

To develop our department as a center of excellence, imparting quality education, generating competent and skilled manpower. We prepare our students with high degree of credibility, integrity, ethical standards and social concern. We train our students to develop to devise and implement novel systems, based on Education and Research.

PROGRAM OUTCOMES (POs)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, research literature, and analyze complex engineering Problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex 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.
4. **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.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **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.
7. **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.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **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.
12. **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.

NEW SOLAR-POWERED SMART WINDOWS : CAN HELP SAVE ENERGY COSTS

In WASHINGTON, Scientists have developed solar- powered smart windows with tunable glazing that can control the heat and light inside a home, saving up to 40 pct in an average building energy costs.

The system developed by researchers at Princeton University in the US features solar cells that selectively absorb near-ultraviolet (UV) light, so the windows are completely self-powered, inexpensive and easy to apply to existing windows. Sunlight is a mixture of electromagnetic radiation made up of near-UV rays, visible light, and infrared energy, or heat.

"The smart window dynamically control the amount of natural light and heat that can come inside, saving on energy cost and making the space more comfortable.

The smart window controls the transmission of visible light and infrared heat into the building, while the new type of solar cell uses near-UV light to power the system.

This new technology is actually smart management of the entire spectrum of sunlight. Since near-UV light is invisible to the human eye, the researchers set out to harness it for the electrical energy needed to activate the tinting technology.

Typical solar cells made of silicon are black because they absorb all visible light and some infrared heat - so those would be unsuitable for this application," Loo said.

In the study published in the journal Nature Energy, the researchers described how they used organic semiconductors - contorted hexabenzocoronene (cHBC) derivatives - for constructing the solar cells.

They chose the material because its chemical structure could be modified to absorb a narrow range of wavelengths - in this case, near-UV light. To construct the solar cell, the semiconductor molecules are deposited as thin films on glass with the same production methods used by organic light-emitting diode manufacturers.

When the solar cell is operational, sunlight excites the cHBC semiconductors to produce electricity. At the same time, the researchers constructed a smart window consisting of electrochromic polymers, which control the tint, and can be operated solely using power produced by the solar cell. When near-UV light from the Sun generates an electrical charge in the solar cell, the charge triggers a reaction in the electro-chromic window, causing it to change from clear to dark blue.

A.Z. AWDHIL IHTHISHAM
III CSE E

DuckDuckGo

DuckDuckgo (DDG) is one of the trending search engines which have many pros than our traditional search engine. **DuckDuckGo** began as an idea for a better search experience with more instant answers and less spam. We hatched out of a few servers in a dusty basement. **DuckDuckGo (DDG)** is an Internet search engine that emphasizes protecting searchers' privacy and avoiding the filter bubble of personalized search results. **DuckDuckGo** distinguishes itself from other search engines by not profiling its users and by deliberately showing all users the same search results for a given search term.

PRIYANKA GANDHI A
IV CSE B

Mastering

BITCOIN

Bitcoin has been with us since 2009, when a person (or group) under the pseudonym Satoshi Nakamoto introduced a platform (Bitcoin, uppercase) that hosts a digital currency (bitcoin, lowercase). Bitcoin is a platform that hosts a digital ledger on which people can mine, store and trade bitcoins, a digital form of currency earned through a computer algorithm and tied to no central authority.

Bitcoin the platform is built on the concept of “proof of work” data that is expensive and time-intensive to produce but can be easily verified. In Bitcoin’s case, proof of work is created through the process of “mining.” To mine a bitcoin, a computer must complete a complicated algorithm, essentially going through the work of an extensive calculation in exchange for some newly minted currency. That piece of digital currency is worth whatever the market decides through supply and demand.

Transactions are connected to a user’s Bitcoin address, which is stored on its general ledger, called the blockchain. If that address is linked to a real identity, transactions can be traced back to the user; if it isn’t, they can’t. This relative anonymity makes the platform appealing for things like incognito purchases over the internet.

A key component of Bitcoin’s blockchain is the fact that it is an open, distributed ledger. Through the distributed nature of this ledger, the transactions on the blockchain are verified by the consensus of every member, offering security and trust without a third-party overseer.

ABISHEK BABU B
II CSE E

FIREBASE ANALYTICS

Firebase Analytics is a free and unlimited analytics solution that helps you learn who your users are and how they interact with your app. Once you add Firebase Analytics code into your Android or iOS app, you can use the data you gather to guide business decisions that will improve your app’s performance and grow your users.

SAMHITHA C
IV CSE C

FACE RECOGNITION SYSTEM 'K-EYE'

A research team led by Professor Hoi-Jun Yoo of the Department of Electrical Engineering has developed a semiconductor chip, CNNP (CNN Processor), that runs AI algorithms with ultra-low power, and K-Eye, a face recognition system using CNNP.

The K-Eye series consists of two types: a wearable type and a dongle type. The wearable type device can be used with a smartphone via Bluetooth. Users hanging K-Eye around their necks can conveniently check information about people by using their smartphone or smart watch, which connects K-Eye and allows users to access a database via their smart devices.

A smartphone with K-EyeQ, the dongle type device, can recognize and share information about users at any time. When recognizing that an authorized user is looking at its screen, the smartphone automatically turns on without a passcode, fingerprint, or iris authentication.

It can detect a face at first and then recognize it, and it is possible to maintain "Always-on" status with low power consumption of less than 1mW.

RAGHU RAMNATH
IV CSE E

2016 - 17 EVEN SEMESTER EVENTS

Student Milestones....

S.Lavanya , III CSE B won First place in Intercollege Technical Symposium, Panchasheel '17, organized by Prince Shri Venkateswara Engineering College.

M.Kavya, II CSE A won prize for outstanding presentation on " Swachh Bharat for Digibeti - India's Best Presentation Contest conducted by Digi-Beti, ICT Academy.

M.Sushil , II CSE F won Second Prize in the event Paper Presentation - Flaminus ' 17 conducted by Meenakshi College of Engineering College.

R.Ranga Prabu , III CSE F presented a paper on"Intellectual Prophecy and Extrapolative Methodology for Dental Caries in Digital Technology" at International Conference on Engineering Technology and Science.

S.Dedeepya, III CSE C Presented a Paper in the Paper Presentation Blue Brain Ample '17 organized by Sri Venkateswara Engineering College, Tirupathi.

SK.Akshaya ,III CSE A completed the certification course " Oracle Certified Professional " conducted by Oracle.

S.Rahul, II CSE D participated in the Designing Workshop - Geohorizon-17 organized by Society of Geo-Informatics Engineers.

A.Sangeetha, III CSE B attended the Workshop Program on Robotics organized by Microsoft Research Community.

Paravada Naveen Teja,II CSE D achieved an Eminent world record under the theme "World's biggest international hands-on Ethical Hacking Workshop organized by Microsoft Research Community.

Crossword Puzzle Answers

Across : 1. Anonymous 2. Freespeech 4. Cyberbullying 5. Copyright 6. Download 7. Privacy 8. Security 9. Consequence
Down : 1. Artificial Intelligence 3. Virus

ANNA UNIVERSITY EXAM 2016 - 2017

★ EVEN SEMESTER TOPPERS ★

IV SEMESTER

First Rank - 8.8 GPA

LUBNAAH JALEEL
SARANYA H

Second Rank - 8.76 GPA

PAVITHRA G

Third Rank - 8.72 GPA

MEENA RAJI N

VI SEMESTER

First Rank - 8.96 GPA

KIRUTHIKA K
KRITHIKA NAGARAJAN

Second Rank - 8.76 GPA

ABINAYA DEVI A

Third Rank - 8.64 GPA

KANIMOZHI N

SHANMATHI T

Tech Quiz Answers

1. Flipkart
2. DCB Bank started India's first AADHAAR based ATM
3. Smishing
4. Cyber Swachhta Kendra
5. Instaload
6. Google Areo
7. Google
8. Wipro
9. The size of the text is directly proportional to the number of times the word is used in your website.
10. Apple

VIII SEMESTER

First Rank - 9.20 GPA

ARCHANA M
JANICE RACHEL SHWETHA
PRAVEENA R S
PRIYADHARSHINI R
SANGAVI G

Second Rank - 9.0 GPA

ATHIYAMAN P
BAKTHAVACHALAM K G
KEERTHIGA J
LAKSHMIPRIYA B
NIVETHA A
RASIKAH K R
SAI MURALI V
SANDHIYA A
SANDHIYA D
SATHYA C

Third Rank - 8.8 GPA

ABINAYA M
ANITHA ALICE A
ANUPRIYA M
ANU PRIYA S
ASHWINI I
CHANDINI
ESWARAN N
GNANASAMBANDAN G P
KANIMOZHI R
KUMUTHA RAJESHWARI
LAKSHMIPRIYA L
MANISHA
PRAVEEN MUTHU K
RAMYA M
RENUKA DEVI J
SAHANA R
SAI VYSHNAVI K S
SANTHANA G
SINDHIYA P
SOWNDHARYA M
SWETHA P
VINITHA S
YAMUNA M
KEERTHIKA T
PADMA PRIYA S

"End is not the end, if fact E.N.D means "Effort Never Dies"" - Dr.A.P.J Abdul Kalam

Face ++

Face++ Cognitive Services is a platform offering computer vision technologies that allow you to easily add leading, deep learning-based image analysis recognition technologies into your applications, with simple and powerful APIs and SDKs.It includes a “liveness” test which prevents anyone from duping the system with a photo and requires people being scanned to move their head or speak while the app scans them.This might transform the way people interact every day with banks, stores, and transportation services. Recently, governments are using its software to identify suspected criminals in the video from surveillance cameras.

PRIYANKA V
IV CSE B

TECH QUIZ .....

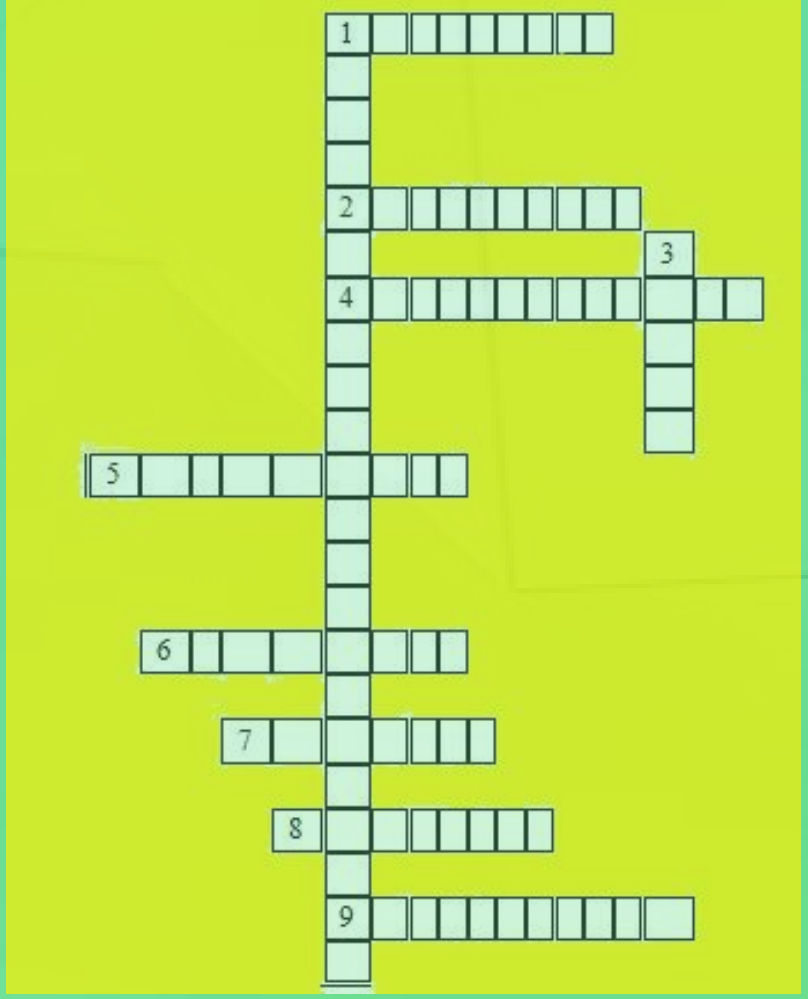
1. PhonePE, NGpay and FXmart are the major acquisitions of?
2. What “first” did DCB bank achieve in India?
3. How phishing by text message is called ?
4. The Government of India has launched a new desktop and mobile security solution through its Computer Emergency Response Team (CERT-in). What is called as ?
5. What is the patented technology developed by Microsoft which allows cylindrical batteries to function in a battery holder regardless of the batteries polarity called ?
6. Which is the Food aggregator service from the world of Google?
7. Turing award is financially sponsored by?
8. ’Bangalore Tiger’ is a book written by Steve Hamm about which company?
9. What is Tag cloud?
10. Newton was an operating system for PDA’s from which company ?

AN OS FOR IoT

Thousands of connected devices, all communicating via the cloud, complete with real-time monitoring and data analytics. With developers rushing to create devices for the Internet of Things (IoT) and many concept projects now underway, there's a big prize for whoever can create the go-to IoT platform. There are already dozens around, from Cisco and AT&T to the industry-wide ZigBee Alliance and GE Predix for industrial applications, but recent months have seen the appearance of Google's Android Things, and a bolstered AWS IoT and Microsoft Azure IoT.

SARANYA H
III CSE B

Trigger the Techie.....



Across
1 when there is not a name given
2 expressing opinions freely
4 bothering another person online
5 the legal right to sell or distribute a work
6 Transferring something between computers or taking it from the internet
7 keep things personal without bother or interference
8 being safe, free of risk
9 the effect or result of something

Down
1 a computer that can do things normally done by a human
3 code used to cause harm to a computer or file

TELEKINECT

TeleKinect is a platform for collaborate interactions at a distance in the same virtual space. The framework supports the real-time videos transport of foreground elements from remote locations and composites them into a merged virtual space. In this position paper we present two applications that utilize the framework for shared experiences at a distance: WaaZam is an application focused on supporting social engagement through creative play. It is focused on how users can collaboratively customize the environment and build sets and studios as places to be together at a distance. The project presents potential scenarios where users can do things together like broadcasting, karaoke, presentations, teaching, and watching television. The demo presents scenarios where users can manipulate simple 3D data for discussion, visualization, and online education environments for classroom purposes

VIJAY E
IV CSE E