National Education Society ®, Shivamogga

JAWAHARLAL NEHRU NATIONAL COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi, Recognized by Govt. of Karnataka and Affiliated to VTU, Belagavi)

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Department of   Computer Science and Engineering

Department of Computer Science and Engg.

COSMOS

Bringing up the Excellence

COSMOBYTE
2017

Message from HOD

A Department magazine carries the contributions reflecting spirit and goals of the students, faculty and other team members of the department. I am happy to know that CS&E dept of JNNCE is bringing out its yet another magazine this year. Through College Magazine students get an opportunity to exhibit their extracurricular talents. They get an opportunity to pen down their thoughts and talents and make the people around them know about the glory of their institution. The role of a magazine is therefore vital in promoting what a department offers. It brings out into the open things hitherto unrevealed. It brings to light the names of the unsung heroes and their mighty deeds. I am happy that there is a dedicated team of staff and students who have brought out the magazine of the Department.

I wish the Magazine a grand success.

Dr. Nirmala Shivanand

VISION

To be one of the pre-eminent departments to provide technical and knowledge based education, utilizing the potential of Computer Science & Engineering to meet the ever changing needs of industry and society.

MISSION

* Mould the students to meet the emerging challenges of industry and society.

* Emphasizing on research.

* Effective industry interaction for the development of state of the art technological infrastructure and faculty component.

PROGRAM EDUCATIONAL OBJECTIVES : GRADUATES OF THE PROGRAM	
PEO -1	Would be able to identify real world problems and solve them effectively using comprehensive knowledge of computer science.
PEO -2	Would be able to pursue higher education or carry research or become a successful entrepreneurs.
PEO -3	To work in changing environment with ethical and social responsibilities.

PROGRAM SPECIFIC OUTCOMES : ENGINEERING GRADUATES ABLE TO	
PSO -1	Apply concepts in the core areas of Computer Science & Engineering – Networking, Data Structures, Computer Architecture, Mathematical Modeling and System Programming to address technical issues.
PSO -2	Design and develop computer based systems by applying standard practices and principles using appropriate tools and programming languages for real world problems.

CLOUD COMPUTING

Cloud computing is a general term for anything that involves delivering hosted services over the Internet. These services are broadly divided into three categories: Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS). The name cloud computing was inspired by the cloud symbol that's often used to represent the Internet in flowcharts and diagrams.

A cloud service has three distinct characteristics that differentiate it from traditional web hosting. It is sold on demand, typically by the minute or the hour; it is elastic -- a user can have as much or as little of a service as they want at any given time; and the service is fully managed by the provider (the consumer needs nothing but a personal computer and Internet access). Significant innovations in virtualization and distributed computing, as well as improved access to high-speed Internet, have accelerated interest in cloud computing.

A cloud can be private or public. A public cloud sells services to anyone on the Internet. (Currently, Amazon Web Services is the largest public cloud provider.) A private cloud is a proprietary network or a data center that supplies hosted services to a limited number of people. Private or public, the goal of cloud computing is to provide easy, scalable access to computing resources and IT services.

Cloud computing characteristics and benefits
Cloud computing boasts several attractive benefits for businesses and end users. Five of the main benefits of cloud computing are:

Self-service provisioning: End users can spin up compute resources for almost any type of workload on demand. This eliminates the traditional need for IT administrators to provision and manage compute resources.

Elasticity: Companies can scale up as computing needs increase and scale down again as demands decrease. This eliminates the need for massive investments in local infrastructure, which may or may not remain active

Pay per use: Compute resources are measured at a granular level, enabling users to pay only for the resources and workloads they use.

Workload resilience: Cloud service providers often implement redundant resources to ensure resilient storage and to keep users' important workloads running -- often across multiple global regions.

Migration flexibility: Organizations can move certain workloads to or from the cloud -- or to different cloud platforms -- as desired or automatically for better cost savings or to use new services as they emerge.

Types of cloud computing service
Although cloud computing has changed over time, it has been divided into three broad service categories: infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS).

Poorvi Rijanikar, 8th B

BIG DATA

Big data refers to a process that is used when traditional data mining and handling techniques cannot uncover the insights and meaning of the underlying data. Data that is unstructured or time sensitive or simply very large cannot be processed by relational database engines. This type of data requires a different processing approach called big data, which uses massive parallelism on readily-available hardware.

Quite simply, big data reflects the changing world we live in. The more things change, the more the changes are captured and recorded as data. Take weather as an example. For a weather forecaster, the amount of data collected around the world about local conditions is substantial. Logically, it would make sense that local environments dictate regional effects and regional effects dictate global effects, but it could well be the other way around. One way or another, this weather data reflects the attributes of big data, where real-time processing is needed for a massive amount of data, and where the large number of inputs can be machine generated, personal observations or outside forces like sun spots.

Processing information like this illustrates why big data has become so important:

*   Most data collected now is unstructured and requires different storage and processing than that found in traditional relational databases.

*   Available computational power is sky-rocketing, meaning there are more opportunities to process big data.

*   The Internet has democratized data, steadily increasing the data available while also producing more and more raw data.

Data in its raw form has no value. Data needs to be processed in order to be of valuable. However, herein lays the inherent problem of big data. Is processing data from native object format to a usable insight worth the massive capital cost of doing so? Or is there just too much data with unknown values to justify the gamble of processing it with big data tools? Most of us would agree that being able to predict the weather would have value; the question is whether that value could outweigh the costs of crunching all the real-time data into a weather report that could be counted on.

Aditya V.K, 8th B

VIRTUAL PRIVATE NETWORK (VPN)

A **virtual private network** (VPN) is a network that is completely isolated from the rest of the Internet.

It provides people, businesses, governments, and military organizations to remotely use network resources securely. For the most part, VPNs are free to use. VPNs use site-to-site and remote access methods to work. They also use an array of encryption services that allow the secure connection to be formed.

So, do we really need VPNs? Actually, yes we do! VPNs provide a vital service to businesses, governments, military organizations, and even individuals.

VPNs provide secure access to your local area network. Without VPNs, accessing sensitive information remotely would not be possible. VPNs allow two or more networks to be connected together. For example, a branch office of a bank located in Nevada and its headquarters located in Texas connect to one another through the Internet securely to share their resources (such as bank statements, mortgage records, etc.) together. With a VPN, both locations are logically connected together as one using the Internet securely as its backbone.

Imagine applying for a home loan where your paperwork has to be snail-mailed back to the corporate headquarters for review. It can take up to a week! But with VPNs, the home loan can be nearly instantaneous reviewed by the bank's headquarters no matter how far separated the branch office and the bank headquarters are.

Anusha D, 8th A

Creativity Corner

Poor God
Kannada Poem by Dinakara Desai

ದೀನಗಿಂತ ದೇವ ಬಡವ !

–ದಿನಕರ ದೇಸಾಯಿ

ಹರಿಗೆ ಎಂದು ಗುಡಿಯನೊಂದ ಕಟ್ಟುತಿರುವೆಯಾ ?

ಹರಿಯ ಒಲುಮೆ ಪಡೆದು ಪುಣ್ಯ ಗಳಿಸುತಿರುವೆಯಾ ?

ಹುಚ್ಚ ! ನೀನು ಹಳ್ಳಿಗೋಡು

ದೀನ ಜನರ ಪಾಡ ನೋಡು

ಇರಲು ಗುಡಿಯ ಇಲ್ಲವಲ್ಲ

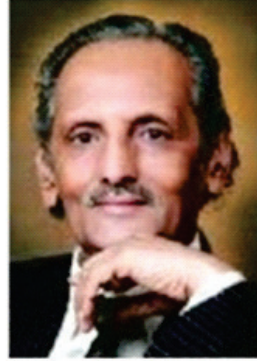ಹೊಟ್ಟೆ ತುಂಬ ಅನ್ನವಿಲ್ಲ !

ಹರಿಗೆ ಎಂದು ಗುಡಿಯನೊಂದ ಕಟ್ಟುತಿರುವೆಯಾ ?

ದೀನಗೊಂದು ಗೂಡು ಸಾಕು

ದೇವಗೊಂದು ವಿಶ್ವ ಬೇಕು

ಮಣ್ಣ ಹುಲ್ಲ ಸಣ್ಣ ಗೂಡು

ಬಡವಗದುವ ಸಿರಿಯ ಬೀಡು

ಹರಿಗೆ ಎಂದು ಗುಡಿಯನೊಂದ ಕಟ್ಟುತಿರುವೆಯಾ ?

ಜಗಕೆ ಗೋಡೆ ಹಾಕಿ ಗುಡಿಯ ಕಟ್ಟಬಲ್ಲೆಯಾ?

ಹರಿಗೆ ಎಂದು ಗುಡಿಯನೊಂದ ಕಟ್ಟುತಿರುವೆಯಾ

ಹರಿಯ ವಿಶ್ವರೂಪವನ್ನು ಮರೆತುಬಿಟ್ಟೆಯಾ?

ದೀನಗಿಂತ ದೇವ ಬಡವನೆಂದು ಬಗೆದೆಯಾ ?

ಎಲ್ಲ ಮರೆತಿರುವಾಗ...

ಎಲ್ಲ ಮರೆತಿರುವಾಗ ಇಲ್ಲಸಲ್ಲದ ನೆವವ

ಹೂಡಿ ಬರದಿರು ಮತ್ತೆ ಹಳೆಯ ನೆನಪೇ

ಕಲ್ಲಿನಂದದಿ ಬಿದ್ದು ತಿಳಿಯಾದ ಎದೆಗೊಳವ

ರಾಡಿಗೊಳಿಸುವೆಯೇಕೆ ಮಧುರ ನೆನಪೇ

ಕಪ್ಪು ಕಣ್ಣಿನ ನೆಟ್ಟ ನೋಟದರೆಚಣದಲ್ಲಿ

ತೊಟ್ಟ ಬಾಣದ ಹಾಗೆ ಬಾರದಿರು ನೆನಪೇ

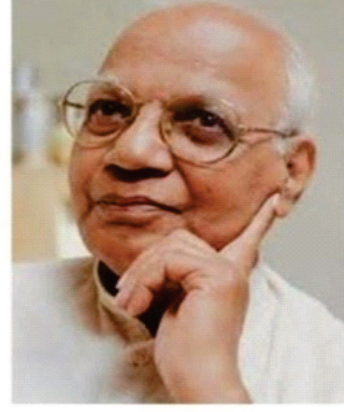ಬಿರಿದ ತುಟಿಗಳ ತುಂಬು ನಗೆಯ ಕಾರಣವನ್ನ

ಹಿರಿದು ಕೊಲ್ಲಲು ಬಳಿಗೆ ಬಾರದಿರು ನೆನಪೇ ॥

ಸತ್ತ ಭೂತವನೆತ್ತಿ ಹದ್ದಿನಂದದಿ ತಂದು

ನನ್ನ ಮನದಂಗಳಕೆ ಹಾಕದಿರು ನೆನಪೇ

ಭವ್ಯ ಭವಿತವ್ಯಕ್ಕೆ ಮೊಗ ಮಾಡಿ ನಿಂತಿರುವ

ಚೆನ್ನಲ್ಲೇ ಇರಿಯದಿರು ಓ ಜಾಣ ನೆನಪೇ ॥

- ಕೆ. ಎಸ್. ನಿಸಾರ್ ಅಹಮದ್

ಎದೆತುಂಬಿ ಹಾಡಿದೆನು

ಎದೆತುಂಬಿ ಹಾಡಿದೆನು ಅಂದು ನಾನು,
ಮನವಿಟ್ಟು ಕೇಳಿದಿರಿ ಅಲ್ಲಿ ನೀವು 11

ಇಂದು ನಾ ಹಾಡಿದರು ಅಂದಿನಂತೆಯೆ ಕುಳಿತು
ಕೇಳುವಿರಿ ಸಾಕೆನಗೆ ಅದುವೆ ಬಹುಮಾನ.
ಹಾಡು ಹಕ್ಕಿಗೆ ಬೇಕೇ ಬಿರುದು ಸನ್ಮಾನ? 11

ಎಲ್ಲ ಕೇಳಲಿ ಎಂದು ನಾನು ಹಾಡುವುದಿಲ್ಲ
ಹಾಡುವುದು ಅನಿವಾರ್ಯ ಕರ್ಮ ನನಗೆ,
ಕೇಳುವವರಿಹರೆಂದು ನಾ ಬಲ್ಲೆನದರಿಂದ
ಹಾಡುವೆನು ಮೈದುಂಬಿ ಎಂದಿನಂತೆ
ಯಾರು ಕಿವಿ ಮುಚ್ಚಿದರು ನನಗಿಲ್ಲ ಚಿಂತೆ. 11

– ಡಾ. ಜಿ.ಎಸ್. ಶಿವರುದ್ರಪ್ಪ

Photo Gallery

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