

VOLUME 16

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IcfaiTech Newsletter

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FROM THE DIRECTOR'S DESK

As I complete a year adorning the prestigious position of being the Director of Icfaitech Hyderabad, I take this opportunity to extend my gratitude to the students, staff, and faculty members for their immense support and relentless efforts to ensure that our institute continues to accomplish accolades.

We are back with yet another edition of the elaborated newsletter, a platform that connects us with our readers by offering a glimpse of our erudite voyage. This issue highlights the immense dedication of our prodigious faculty members, staff, and students by showcasing their several achievements and impactful efforts. This version of the newsletter also tells tales of the activities that encompass our vibrant campus and mentions the further laurels awarded to Icfaitech, Hyderabad.

We are pleased to welcome you to read on and stay connected with us!



~ Dr. K.L. Narayana
Director, Icfaitech, Hyderabad

ONGOING PLACEMENTS

The placement season at IcfaiTech, Hyderabad continues and companies are invited to recruit students of the institute. November witnessed placement recruitment drives conducted by reputed organizations such as Hexaware (6 LPA), Keyence India Ltd. (5 LPA), NSL Hub (6 LPA), Wiley-Edge (9 LPA), Endpoint Clinical India Pvt. Ltd. (5 LPA), Turning Minds (6 LPA), and Delta-X (4 LPA).

ACCOLADES

IFHE Hyderabad received the "Best Private University" award at the Telangana Educational Leadership Awards ceremony held on 04th November at the Taj Vivanta Hotel.

Ermin Automotive, one of the start-ups promoted by an IcfaiTech alumnus, Mr. Shashank Reddy, has won the T-Hub (an innovation intermediary, and business incubator established via a Public-Private Partnership involving the government of Telangana) "Best Startup" award in the electric vehicles (EV) category. Incidentally, the company has already struck and closed a commercial deal worth over Rs.5 crores in the EV producers' market.



CAMPUS HAPPENINGS

Paritantra club conducted Annual General Body Meeting.

Date: 4th November

Brief Description: Paritantra club celebrated its 5th year anniversary by conducting an Annual General Body Meeting on the 4th of November 2022. Dr. K.L. Narayana, Director, was invited as the Guests of Honour, Dr. Suresh Kumar and Dr. Jyothi Ranjan Nayak, Associate Deans also attended this event. Dr. Anjanna Matta, club mentor was also present.

The event initially started with a melodious welcome song. In this ceremony, the club initially recollected and rejoiced in the memories of all the successful events conducted in the past years. Then the members gave an introduction about the club and explained how the club Paritantra works. Dr. K. L. Narayan, a sculptor of human character, a seasoned scholar, and the flagship of knowledge addressed the gathering about how a club should work and the impact it brings and gave a hearty welcome to the new members. He even appreciated and congratulated the students leaving the club. Later, students were awarded by the director for their excellency and volunteer work they had done for the club. It was a special day for the club for recollecting memories, talking about the great events, and creating a nice place for the new members of the club to become familiar with each other.



Entrepreneurship Club organized a webinar.

Title: My Story: Motivational Session by Successful startup Founder

Speaker: Mr. Shashank Reddy, CEO, Ermin Automotive

Date: 18th November 2022

No. of Participants: 39

No. of Faculty Participants:1

No. of External Participants: 1



FACULTY ACHIEVEMENT

Dr. Banoth Seetharamulu, Assistant Professor, Department of CSE and

Dr. S. Kaushik, Associate Professor, Department of CSE attended International conference.

Conference Title: UX DESIGN, Hyderabad

Date: November 4th and 5th 2022



Dr. Banoth Seetharamulu



Dr. S. Kaushik

About the Conference: UXINDIA at its core is a confluence of thought leadership in design from the industry, the institution, and the individual to ignite, inspire, and delight communities through design-driven social change.

UXINDIA is a flagship program of UMO. UXINDIA is being organized by UiSER.

Dr.Movva Pavani, Assistant Professor, Dept. of ECE, has participated in FDP.

Title: Recent Trends in Artificial Intelligence and Cyber Security
Organized by: Department of Computer Science, Shri Vishnu Engineering College for Women (A), Bhimavaram

Date: 01-05 November 2022



Dr. Anjanna Matta, Assistant Professor, Coordinator, Department of Mathematics published research papers.

Paper 1

Title: Non-linear magnetoconvection in a bidispersive porous layer: a Brinkman model

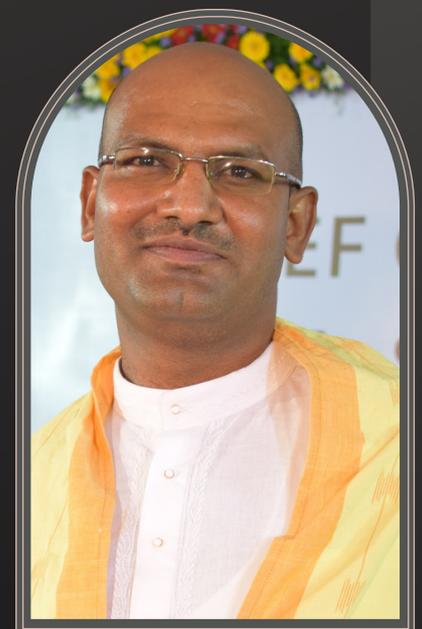
Journal Name: Earth Science Informatics

Impact Factor: 2.98 (Q2)

Indexed: Web of Science, SCIE journal, Scopus

Publisher: Springer

Abstract: This study examines the magnetic effect on Darcy Brinkman convection in a Bidispersive horizontal porous layer, considering the importance of convective motions of electrically conducting porous media accompanying a magnetic field in real-life applications such as geophysics, metallurgical field and solidification structures.



In order to conduct a thorough study, the boundaries are classified as free-free, rigid-free, and rigid-rigid. The fluid motion is described using the Brinkman-Darcy equation with a single temperature in the macropores and micropores. The eigenvalue problem is solved analytically for the free-free case by employing linear stability theory. A non-linear analysis using the energy method is undertaken to prove that linear instability and global non-linear stability thresholds are the same.

The eigenvalue problem for rigid-free and rigid-rigid boundaries is numerically solved with the `bvp4c` routine in MATLAB R2020 with the Rayleigh number as the eigenvalue. It is found that the Hartmann number M_2 , Darcy number Da , permeability ratio κ_r , and momentum transfer coefficient γ stabilize the system. Rigid-rigid boundaries are found to be the most stable ones, followed by rigid-free and free-free, which are the least stable boundaries.

Paper 2

Title: Effect of viscous dissipation and internal heat source on mono-diffusive thermoconvective stability in a horizontal porous medium layer

Journal Name: Special Topics & Reviews in Porous Media - An International Journal

Impact Factor: 1.44 (Q2)

Indexed: Web of Science, SCIE journal, Scopus

Publisher: Begell House Inc

Abstract: A mathematical model is developed for studying the onset of mono-diffusive convective fluid flow in a horizontal porous layer with temperature gradient, internal heat generation and viscous dissipation effects. Darcy's model is deployed for the porous medium which is considered to be isotropic and homogenous. A linear instability analysis is conducted and transverse or longitudinal roll disturbances are examined.

The dimensionless emerging eigenvalue problem is solved numerically with Runge-Kutta and shooting methods for both cases of disturbances i.e. longitudinal and transverse rolls. Critical wave number and critical vertical thermal Rayleigh number R_z are identified. For higher value of Gebhart number Ge , a significant destabilizing effect of Hadley-Prats flow is computed. Internal heat generation also strongly modified critical vertical Rayleigh number. Extensive interpretation of the solutions relating to the onset of convection is provided. The study is relevant to geophysical flows and materials processing systems.

Dr. Movva Pavani, Assistant Professor,
Department of ECE, published a
research paper.

Title: Cotton Leaf Diseases Detection
and Prediction Using RESNET
Algorithm

Journal: Harbin Gongye Daxue
Xuebao/Journal of Harbin Institute of
Technology

Index: Scopus



Abstract: In India, most of the revenue is generated from the agriculture sector. In agriculture, most of the farmers produce different farms like rice, wheat...etc. The most important farm is cotton, It is also called “White Gold”. The production of cotton is a very sensitive farm. If production is good it gives more profit. If production is less shows big losses and its leads to farmers' suicide also.

In this regard, the main objective of this paper is to detect the diseases in the leaf of the cotton le leaf. To predict, the disease was priorly given to alert farmers and it leads an increase in the production of cotton. In computer science and engineering, there are so many cutting-edge technologies are used to provide solutions in any field. Now Deep Learning is one of the cutting-edge technology used to predict situations in the agriculture field is the important thing. In the cotton crop growth, the main thing is healthiness. if any insects and weather change diseases happened. By using RESNET algorithms to classify the diseases and predict the labels of the disease and find out the accuracy and find out the best suitable algorithm.

Dr. A. Manmadha Chary, Assistant Professor, Department of Mechatronics Enginnering, published a book chapter.

Book Chapter Title: 3D-Printed membrane for water treatment

Book Name: 3D Printing Technology for Water Treatment Applications

Publisher: Elsevier



Dr.Movva Pavani, Assistant Professor,
Department of ECE, attended
International Symposium.

Title: New Trends in IoT

Organized by: The ICFAI University,
Jaipur in association with NASSCOM
FUTURE PRIME Skills and IET(UK)

Date: November 18, 2022



Dr. Durga Prasad Kavadi, Assistant
Professor, Dept. of Computer Science
and Engineering, was invited to deliver
a guest lecture.

Lecture Title: Data Communication &
Networking

Invited by: Geetanjali College of
Engineering and Technology,
Hyderabad

Date: 24th November 2022



Third year Mechatronics Engineering
student completed a phenomenal
special project and contributed to
the enrichment of research of
IcfaiTech, Hyderabad.

Student name: Vedanth Chowdary
and B.Visal

Project: Fabricated a plotter



Mr. Shaik Himam Saheb, Assistant Professor,
Department of Mechatronics Engineering,
has been awarded Doctorate.

Date: 29th November 2022



Dr. Rashmi Sahay, Assistant Professor,
Dept. of CSE, was invited to deliver a
guest lecture.

Title: Security Requirement of IoT-
enabled Smart Healthcare Systems

Workshop Title: Women in Sensors
(WiSe)- Security and Health, 2022

Organized by: IEEE Sensors Council
Hyderabad Chapter, IEEE Hyderabad
Section in association with IEEE
BVRITH Student Branch

Date: 16th- 17th Nov 2022



Mr. Rajesh Kumar Annarapu,
Training and Placement Officer,
received Award of Excellence 2022

Awarded by: Eduvoice

Awarded for: unmatched
contribution and exceptional
foresight in the field of Higher
Education, and for his untiring
selfless and dedicated service



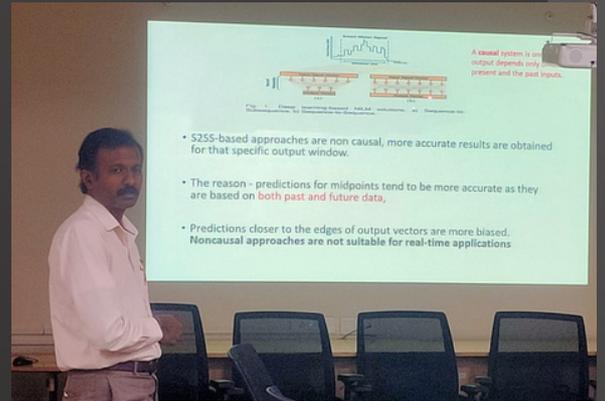
DEPARTMENTAL SEMINAR

Title: Deep Learning-Based Probabilistic Autoencoder for Residential Energy Disaggregation: An Adversarial Approach

Speaker: Dr. R. Balamurli, Assistant Professor, Dept. of CSE

Organized by: Department of CSE

Date: 10th November 2022



Abstract: Energy disaggregation is the process of disaggregating a household's total energy consumption into its appliance-level components. One of the limitations of energy disaggregation is its generalization capacity, which can be defined as the ability of the model to analyze new households. In this article, a new energy disaggregation approach based on adversarial autoencoder (AAE) is proposed to create a generative model and enhance the generalization capacity. The proposed method has a probabilistic structure to handle uncertainties in the unseen data. By transforming the latent space from a deterministic structure to a Gaussian prior distribution, AAEs decoder transforms into a generative model. The proposed approach is validated through experimental tests using two different datasets. The experimental results exhibit a 55% MAE performance increase compared to deterministic models and 7% compared to probabilistic models. In addition, considering the predictions made when the appliances are ON, the AAE improves the performance by 16% for UKDALE and 36% for REDD dataset compared to the state-of-art models. Moreover, the online analysis performance of AAE is examined in detail, and the disadvantages of instant predictions and the possible solutions are extensively discussed.

Title: A machine learning approach for celebrity profiling

Speaker: Dr. Durga Prasad Kavadi, Assistant Professor, Dept. of CSE

Organized by: Department of CSE

Date: 17th November 2022



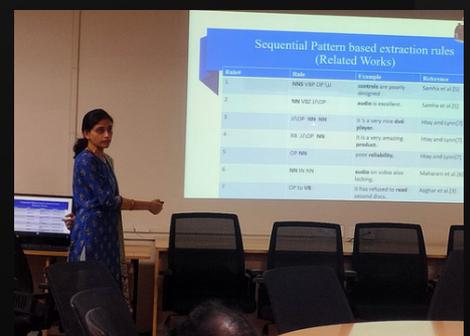
Abstract: Celebrity profiling is used to predict the sub-profiles like gender, fame, birth year, and occupation of a celebrity for a given textual content. The task of celebrity profiling is introduced in PAN Competition 2019. Most of the researchers in the competition have shown interest in stylistic features to differentiate the writing styles of celebrities. In this work, a sub-profile-based weighted approach is proposed to improve the accuracy of celebrity profiling. In this approach, the most frequent terms are used to compute the document weight. The document weights were used to represent the document vectors instead of the weights of features. The document vectors are forwarded to machine learning algorithms to build the training model. The proposed method achieved competitive accuracies of 77.13% for gender prediction, 87.76% for fame prediction, and 91.54% for occupation prediction. The accuracies of the proposed approach for sub-profile prediction outperform several existing approaches for celebrity profiling.

Title: New Sequential Pattern based Rules for Explicit Aspect Extraction

Speaker: Ms. Pallavi Mishra

Organized by: Department of CSE

Date: 24th November 2022



Abstract: In the machine learning era, aspect-based sentiment analysis is a very popular idea that is still in the research realm. The main objective of this paper is to derive new pattern-based rules for Aspect Extraction. This focuses on the Explicit aspects where the aspect is precisely defined, unlike the previously researched papers on Aspect Extraction, this model does not limit itself to the noun/noun phrases but also focuses on the other words like verbs in a review. Newly extracted pattern rules for aspect extraction would be proved beneficial in terms of sentiment analysis of online customers.

Title: Accurate prediction of Compressive strength of concrete using ensemble-based Machine learning algorithms

Speaker: Mr. I.V. Sarma, Assistant Professor, Department of Civil Engineering

Organized by: Department of Civil Engineering

Date: 29th November



Concrete is the backbone of the construction industry. It is used in various structures related to buildings, infrastructures, etc. The compressive strength of concrete must be calculated while designing the structure. The uncertainty associated with the compressive strength is high as concrete is a heterogeneous material. Many researchers have developed several empirical formulae to estimate the compressive strength of concrete, but the accuracy of the estimation is poor.

This study uses ensemble-based machine learning algorithms for the estimation of the compressive strength of concrete. Results show that ensemble-based machine learning algorithms have significantly increased the accuracy of estimating the compressive strength of concrete.

SCHOLARS PURSUING RESEARCH

PhD Awarded

Scholar: Ms. Swapna Samala

Supervisor: Dr. Gouri Shankar Brahma, Associate Professor,
Dept. of Chemistry

Department: Chemistry

Date: 14th November

Topic: Synthesis, characterization and study of thermal properties of compounds, composites and complexes of Cobalt

Thesis Proposal Defense

Scholar: Keerthi Somraj

Department: ECE

Date: 24th November

Topic: Design and Optimization of Low Noise Amplifier for Future Wireless Communication

Scholar: Ms. Pallavi Mishra

Department: CSE

Date: 18th November

Topic: Unsupervised Rule based Explicit Aspect Extraction and Supervised mode of Sarcasm Classification task for Sentiment Analysis



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LinkedIn:

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admissions.icfaitech@ifheindia.org



IcfaiTech, IFHE Campus Dontanpally,
Shankarpally, R R District,
Hyderabad - 501 203.



Phone : 040-23479725 / 040-
23479732
Mobile: 8499848444
Call/Whatsapp: 9010377002

Editorial Team:

Dr. K. L. Narayana, Director, IcfaiTech
Dr. Rashmi Sahay, Asst. Prof.-CSE, IcfaiTech
Ms. Manoswita Dasgupta, Content Writer, IcfaiTech