NEWS LETTER

Department of Computer Science & Engineering

TECH TIMES

A Half- Yearly Newsletter

June 2021

"The computer was born to solve problems that did not exist before."
— Bill Gates

PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

Contents

Department of Computer Science & Engineering

The Department of Computer Science and Engineering was formed in the year 1999. The department has started B.Tech program with an initial intake of 40 in the year 1999 and 120 from 2007 onwards. The department has also started M.Tech program with an initial intake of 18 in the year 2006, and an increase in the intake to 36 in the year 2011. The department is accredited by NBA in the year 2007 for a period of 3 years and was reaccredited in the year 2012 for a period of 2 years. In 2019 department was accredited for a period of 3 years.

The department has 31 qualified teaching staff with 10 PhDs and 21 M.Techs. Our faculty members aim at delivering top class education blending their rich research experience with class room teaching. The entire faculty is involved in research activities and has published/presented papers in national and international journals and conferences.

The department has ACM student chapter and CSI student chapter. The department offers various certification training programs to students like APSSDC Mobile App Development Program to make the students well prepared to face the industry. The department has also established Intel FICE Lab to encourage students with new technologies.

Guest Lectures / Workshops / Co-curricular events organized by Department

The department of Computer Science and Engineering organized ---

i. A Hands-on Faculty Development Program and Student Workshop on "Block Chain Technology" in association with Academic Interface Program, TCS, Hyderabad from 18-01-2021 to 22-01-2021.Co-ordinator: Dr S Phani Praveen.

ii. An Alumni Webinar Sequence #5 on "Getting Industry Ready" by Ms. P. Sandhya, VM Ware India, Bangalore on 23-01-2021. Co-ordinator: Ms. T. Sri Lakshmi

iii. A Hands on Faculty Development Program and Student workshop on "Cyber Security" in association with Academic Interface Program, TCS, Hyderabad from 25-03-2021 to 27-03-2021. Co-ordinators: Mrs. A. Divya, Dr. S. Phani Praveen.

iv. **Kshatragna-2021** CSI National Level Student Convention Program conducted six events Techno buzz, Riddle trap, Logo Hunter, Tech wreck, Swift Coder, Word wizard from 27-01-2021 to 28-01-2021.Coordinators: Mr. K. Vijay Kumar, Ms. A. Madhuri, Ms. D. Swapna

v. A webinar on "**Web Development**" as a part of Industry institute interaction program for IIIrd and IVth CSE Students on 08-05-2021. Resource person: Mr. Teja Venkata Krishna Yanamadala, Technology Analyst, Infosys Ltd, Hyderabad. Co-ordinators: Dr. A. Jaya lakshmi, Ms. A. Divya.

vi. A webinar on "**Role of XML in Web Development**" for IIIrd CSE Students on 21-05-2021. Resource person: Ms. B.Madhuri, Business Analyst, HCL Technologies, Hyderabad. Co-ordinators: Ms. D. Sree Lakshmi, Mr. B. Vishnu Vardhan.

vii. A webinar on "Role of Algorithms in Software Development" for II CSE Students on 19-06-2021. Resource person: Mr. Faiyazthulla Shaik, Developer Systems Engineer, Tata Consultancy Services Pvt. Ltd, Hyderabad. Co-ordinators: Mr. K. Venkatesh, Ms. Kiriti Paliwal, Ms. Shilpee Kumari.

Faculty Achievements
a. Patents:

i. Dr. K. Koteswara Rao, Dr. G. Lalitha Kumari, Ms. Y. Surekha, Mr. A. Vanamala Kumar got a grant for the patent "Augmented Reality Based Personalized Smart Diet Assistance System" with application no: 202041024942 bearing patent No: 361910, Intellectual Property Rights, Government of India

ii. Mrs. T. Sri Lakshmi, Mrs. A. Madhuri, Mr. Yuva Krishna A, Dr. Lakshmi Ramani B, Dr. B Janakiramaiah published a patent entitled "Mental and Physical Fitness Prediction Using

Machine Learning Programming" with application no: 202141009027 on 26-3-2021, Intellectual Property Rights, Government of India

iii. Dr. S. Phani Praveen published a patent titled "*Red Deer Algorithm For Anomaly Detection In Sensor-Based Cyber-Physical Systems*" with the Application Number: 202141017669 dated: 23-4-2021, Intellectual Property Rights, Government of India.

iv. Ms. D.SreeLakshmi and Ms. A.Divya published a patent "Crowd Detection Camera to maintain Distance and Identify The Suspect Using AI-Based Programming" with Application No: 202141018141A, May 2021, Intellectual Property Rights, Government of India.

b. Guest lecturers delivered:

i. Mr. A.Vanamala Kumar delivered a talk on "National Program on Technology Enhanced Learning (NPTEL) and its Benefits for Students and Staff" in NPTEL E-Awareness Workshop Conducted by IIT Madras, Chennai held on 4th January, 2021.

ii. Dr. K. Koteswara Rao delivered an informative and thought provoking session on Stock Market Prediction using ML, SVM" in AICTE sponsored online STTP on "Python Based Machine Learning- Fundamentals to Applications" organized by ANURAG Enginneering College, Ananthagiri, Kodad held on 21-1-21.

iii. Dr. K. Koteswara Rao delivered a lecture on "Fundamentals of Machine Learning and Supervised Learning Algorithms" in AICTE sponsored online STTP on "Python Based Machine Learning- Fundamentals to Applications" organized by ANURAG Enginneering College, Ananthagiri, Kodad held on 23-2-21.

iv. Dr. K. Koteswara Rao delivered a lecture on " Machine Learning Fundamentals and Supervised Learning Algorithms" in AICTE sponsored online STTP on "About Machine Learning Fundamentals and Supervised Learning Algorithms" organized by St. Mary's Women's Enginneering College, Budampadu, Guntur held on 25-2-21.

v. Dr. K. Koteswara Rao acted as the resource person and delivered a talk on "Unsupervised learning Algorithms" & "Genetic Algorithms" from 9-3-21 to 10-3-21 as a part of All India Council for Technical Education (AICTE) sponsored Short Term Training Programme (STTP)- Phase-II titled "Recent Trends in CSE" held during 8-3-21 to 13-3-21 organised by Dept. of CSE, St. Mary's Women's Engineering College, Budamapadu, Guntur.

vi. Dr. K. Koteswara Rao acted as the resource person and delivered a talk on "An Insight into Genetic Algorithms" & "Fuzzy Logic Development" from 24-3-21 to 25-3-21 as a part of All

India Council for Technical Education (AICTE) sponsored Short Term Training Programme (STTP)- Phase-III titled "Recent Trends in CSE" held during 22-3-21 to 27-3-21 organised by Dept. of CSE, St. Mary's Women's Engineering College, Budamapadu, Guntur.

vii. Dr. B. Janaki Ramaiah delivered a talk on " Detecting COVID-19 from X-Ray using Machine Learning", in One-Week National Online Faculty Development Programme (FDP) on "Emerging Trends in the Applications Machine Learning and Artificial Intelligence" organized by Department of Information Technology, GMR Institute of Technology, Rajam, 2-6-2021 to 25-6-2021.

c. Reviewers of journals:

i. Dr K Koteswara Rao, Dr G Lalitha Kumari, Dr J Rama Devi, Mrs Y Surekha are appointed as Editors for Special Issue on "Machine Learning and Internet of Technologies for Environmental Issues" for the Journal "Computers, Materials & Continua" Tech Science Press, USA- Scopus & SCIE Indexed Journal. ISSN: 1546-2226 (online), Impact Factor 4.89.

d. Faculty Participation (as a Judge, Guest, or BOS member, & Chairing a session, etc.):

i. Dr. B. Janaki Ramaiah nominated as mock inspection member for the mock inspection of NBA held at SASI Institute of Technology & Engineering, Tadepalligudem held on 20-02-2021.

i. Dr. B. Janaki Ramaiah appionted as External Academic Auditor for the External Academic Audit held at NRI Institute of Technology, Agiripalli held on 19-04-2021.

e. Ph.Ds awarded :

i. Dr. N. V. Ramana Gupta received his Doctoral Degree from Acharya Nagarjuna University for his work entitled "A Novel Method for User Centric Integration in MANETS using Nature Inspired Algorithms" on 18-6-2021.

Faculty Publications/ Conferences

a) SCI/SCIE/ESCI /Scopus indexed journals:

i. Ms.A.Madhuri, Dr. S. Phani Praveen , D. lokesh Sai Kumar published a paper entitled "Challenges and Issues of Data Analytics in Emerging Scenarios for Big Data, Cloud and Image Mining" in *International Journal of Annals of the Roman Society for Cell Biology* in January 2021 with ISSN: 1583-6258**.(Scopus Indexed)**

ii. Dr.S.Phani Praveen published a paper entitled "An Effective Secure Storage of Data in Cloud Using ISSE Encryption Technique" in the *Journal Annals of R. C. S. B* with ISSN:1583-6258, vol. 25, issue 1, 2021**(Scopus Indexed).**

iii. Ms. M. Sailaja published a paper titled, "Ensemble Distributed Search-FSGM-CRD Compressed Cache Algorithm for Large Datasets " in *International Journal of Turkish Journal of Computer and Mathematics Education*, Vol-12, Issue-2, pp. 2854-2858, ISSN: 1309-4653, February, 2021. **(Scopus Indexed)**

iv. Dr. K. Koteswara Rao, Dr G Lalitha Kumari and Ms Y Surekha published a paper titled "Adaptive Genetic Algorithm (AGA) Based Optimal Directed Random Testing for Reducing Interactive Faults" in *Indian Journal of Computer Science and Engineering* Vol. 12 No. 2, ISSN: 0976-5166 Mar-Apr 2021. **(Scopus Indexed)**

v. Mr. A. Yuva Krishna published a paper entitled "Framework for Tree Crown Delineation from Panchromatic Images" in *EAI Endorsed Transactions on Energy Web*, ISSN: 2032944X, April, 2021**.(Scopus Indexed)**

vi. Dr. S. Madhavi published a paper titled "Secured Quantum Wireless Sensor Network Using IQOTP and Super Dense Coding" *International Journal of Future Generation Communication and Networking (IJFGCN)*, ISSN: 2233-7857(Print); 2207-9645(Online), NADIA, (2021), Vol. 14, No. 1, pp. 59-74.**(SCI)**

vii. Dr. B. Janaki Ramaiah published a paper titled "Diabetic retinopathy detection and classification using capsule networks" in Complex & Intelligent Systems Vol-7, Issue-2, pp. 2854-2858, ISSN: 2198-6053, April, 2021.**(SCIE)**

viii. Dr. B. Janaki Ramaiah published a paper titled "Military object detection in defense using multi-level capsule networks" in *Soft Computing* ISSN: 1433-7479. May 2021**.(SCIE)**

b) UGC/other journals:

i. Dr.A Jaya Lakshmi published paper titled "An Efficient Framework for Resource Optimization and Task Scheduling in Cloud Computing" *Annals of the Roman Society for Cell Biology*, Volume 25, Issue 5, May 2021, ISSN: 1583-6258.

ii. Ms.D.Sree Lakshmi has published a paper titled "Sensor Signal-based Learning Improvement Framework for Intellectually Disabled (ID) Child Education" *Turkish Journal of Computer and Mathematics Education*. Issue 10 Volume 12, May 2021, ISSN: 2066-2075.

iii.   Mr. B. Vishnu Vardhan published paper titled "Unmanned Six-Wheels Bogie Rover with Robotic Arm for Surveillance and Fixing Objects" *Turkish Journal of Computer and Mathematics Education.* Volume 12 Issue 10, May 2021, ISSN: 2066-2075.

iv.   Dr.J.Ramadevi published a paper entitled "The Intel-based Sub-Numa Clustering Approach for Memory Allocation in Multi Core Processors" in Turkish Journal of Physiotherapy and Rehabilitation, Vol-32, Issue-3, June-2021 with ISSN:2651-4451

v.   Ms.D.Swapna published a paper entitled "Research Challenges and Opportunities in Data Science – An Intensive Review " in Linguistica Antverpiensia, Volume-2021, Issue-2, in May 2021 with ISSN:0304-2294

c) **Book** chapters:

i.   Dr. B. Janaki Ramaiah published a Book Chapter titled "Dementia detection using the deep convolution neural network method" in Trends in deep Learning Methodologies-Algorithms, Applications and Systems-A Volume in Hybrid Computational Intelligence for Pattern Analysis Pages 157-181with ISBN: 978-0-12-822226-3.

ii.   Dr. B. Janaki Ramaiah published a Book Chapter titled "Deep learning-based detection and classification of adenocarcinoma cell nuclei" in Trends in deep Learning Methodologies-Algorithms, Applications and Systems-A Volume in Hybrid Computational Intelligence for Pattern Analysis Pages 241-264with ISBN: 978-0-12-822226-3.

iii.   Dr.B.Janaki Ramaiah editited a Book titled " Intelligent System Design" part of Advances in Intelligent Systems and Computing book series(AISC), Volume-1171.

d) **Conferences:**

i.   Dr.K.Koteswararao, Dr.G.Lalitha Kumari and Ms.Y.Surekha presented a paper entitled " Machine Learning and IOT Technologies for Environmental Issues – Research Perspectives" in 4th International Newyork Conference on Evolving Trends in Interdisciplinary Research & Practices, from 2-5-2021 to 4-5-2021 with ISBN:9781955094030.

ii.   Dr.G.Lalitha Kumari and Ms.Y.Surekha presented a paper entitled "An Electronic Security System to safeguard the child from deleterious objects using Deep Learning Xception Model" in 4th International Newyork Conference on Evolving Trends in Interdisciplinary Research & Practices,, from 2-5-2021 to 4-5-2021 with ISBN:9781955094030.

iii.   Dr.G.Lalitha Kumari and Ms.Y.Surekha presented a paper entitled "Systematic Survey of Mutation Testing – Rookies Vantage Point " An Electronic Security System to safeguard the child from deleterious objects using Deep Learning Xception Model" in 4th International

Newyork Conference on Evolving Trends in Interdisciplinary Research & Practices, , from 2-5-2021 to 4-5-2021 with ISBN:9781955094030.

iv. Ms.Y.Surekha , Dr.G.Lalitha Kumari and Dr.K.Koteswararao presented a paper entitled "The Role of Internet of Things and Machine Learning in Environmental Forecasting – Proposal Method" in 4th International Newyork Conference on Evolving Trends in Interdisciplinary Research & Practices, , from 2-5-2021 to 4-5-2021 with ISBN:9781955094030.

v. Ms.D.Swapna presented a paper entitled "Driver Drowsiness Detection Using Facial Parameters and RNNs with LSTM" in 2020 IEEE 17th India Council International Conference(INDICON) from 10-12-2020 to 13-12-2020 with ISBN:978-1-7281-6917-0, published in January 2021.

Workshops/Faculty Development Programs attended by the faculty

a) Seminars/Webinars:

i. Mr. V. Rajesh participated in a seminar on "Builders Online Series (Your Quick start to AWS) "organized by Amazon, US on 21-01-2021.

ii. Dr. S. Madhavi participated in a webinar on "Learning Outcome Based Approach for Curriculum Planning and Development" organized by MasterSoft ERP Solution pvt. Ltd. on 30-01-2021.

iii. Dr. S. Madhavi participated in Virtual Training Program on "Small Grant Opportunities for NGOs/Academic Institute" organized by Navjivan Center for Development on 9-05-2021.

iv. Dr. S. Madhavi participated in Virtual Follow up session on "Small Grant Opportunities for NGOs/Academic Institute" organized by Navjivan Center for Development on 13-5-2021.

v. Dr S.Madhavi participated in a webinar on "Introduction of Leading UK Based Institutional Donors" organized by NCD, Gujarath on 13-06-2021.

vi. Ms. D. Swapna, Mrs.T. Sri Lakshmi, Mr. P. Anil Kumar and Mr. B. Rajesh participated in "Effective and Efficient online Teaching" organized by IIT Bombay on 12-06-2021.

vii. Mr. V. Rajesh participated in National webinar on "Android Application Security" organized by Vignan University, Guntur on 18-06-2021.

viii. Ms. M. Sailaja participated in Webinar on "Tips on Literature Search & Writing Scientific Papers" in organised by Research & Development Cell, P. B. Siddhartha College of Arts & Science, Vijayawada on 24-6-2021.

b) Workshops:

i. Mr. B. Rajesh attended Workshop on "Real World Applications and Challenges in Internet of Things (IoT) and Blockchain Technology" organized by SRM University, Andhra Pradesh from 18-01-2021 to 22-01-2021.

ii. Dr. G. Lalitha Kumri and Ms. Y. Surekha participated in 5-day Workshop on "Linux" organized by VIT, Chennai from 10-05-2021 to 14-05-2021.

c) STTP/STCs:

i. Dr. K. Koteswara Rao participated in a AICTE Sponsored One Week Online Short Term Training Program on " Python Based Machine Learning, Fundamentals to Application [Phase-II] " organized by Anurag Engineering College, Kodad from 18-01-2021 to 23-01-2021.

ii. Ms. Shilpee Kumari participated in Train the Trainer program on "Android Development with Kotlin" organized by ICT Academy from 01-03-2021 to 06-03-2021.

iii. Mr. M. Ramgopal participated in AICTE Short Term Training Programme on "Speech and Image Processing using Deep Learning Techniques" organized by Annamalai University from 17-03-2021 to 23-03-2021.

d) Faculty Development Programmes:

i. Dr. S. Madhavi attended a one week AICTE ATAL FDP on "Quantum Computing" organized by GITAM, Bengaluru from 04-01-2021 to 08-01-2021.

ii. Mr.K. Vijay Kumar attended a one week FDP on "Artificial Intelligence" organized by Gyanganga Institute of Technology and Sciences, Bhopal from 04-01-2021 to 08-01-2021.

iii. Mr. P. Anil Kumar attended one week ATAL Faculty Development Program on "Internet of Things (IOT)" organized by NIT Durgapur from 05-01-2021 to 09-01-2021.

iv. Dr. G. Lalitha Kumari, Ms. Y. Surekha, Mrs.M. Sailaja, Mr.A. Vanamala Kumar and Dr. B. Lakshmi Ramani attended two week ATAL FDP on "Machine Learning" organized by E&ICT, IIT Kanpur from 11-01-2021 to 22-01-2021.

v. Mrs.T. Sri Lakshmi attended one week AICTE ATAL FDP on "Data Science" organized by MSME Technology Development Center, Govt. of India from 18-01-2021 to 22-01-2021.

vi. Mr.K. Venkatesh, Mr.P. Anil Kumar, Mrs.A. Madhuri, Dr. S. Madhavi, Dr. J. Ramadevi, Mrs.D. Sree Lakshmi, Dr. K. Koteswara Rao, Dr. S. Phani Praveen,Mr. D.L. Sai Kumar, Mrs.B. Narasimha Swamy, Mr.V. Rajesh, Mr.R. Yashwanth, Mrs.V. Siva paravathi, Mr.S.

Krishna Kishore, Mrs.D. Swapna, Ms.Shilpee Kumari, Mr.K. Vijay Kumar, Mr.B. Vishnuvardhan, Mr.A. Yuva Krishna attended FDP on "BlockChain Technology" organized by Depatmet of Computer Science and Engineering in association with Academic Interface Program,TCS,Hyderabad from 18-01-2021 to 22-01 -2021.

vii. Dr. G. Lalitha Kumari, Ms. Y. Surekha, M. Sailaja, A. Vanamala Kumar attended one week AICTE ATAL FDP on "Data Sciences" organized by GEC, Gudlavalleru from 19-01-2021 to 23-01-2021.

viii. Mrs.T. Sri Lakshmi attended one week AICTE ATAL FDP on "Artificial Intelligence" organized by SJCCE Mysore from 27-01-2021 to 31-01-2021.

ix. Dr. S. Phani Praveen attended two day FDP on "Recent Trends in Computer Science and Information Technology" organized by AGK & SCR Siddhartha College of Arts & Science, Vuyyuru from 23-01-2021 to 24-01-2021.

x. Dr. J. Rama Devi participated in an online faculty Development Programme on "Data Science for ALL" jointly organized by E & ICT Academies at NIT Warangal, IIITDM Jabalpur, IIT Kanpur, NIT Patna, IIT Guwahati, MNIT Jaipur and IIT Rourkee from 12-05-21 to 23-04-2021.

xi. Mr. B.Vinay Kumar participated in online Faculty Development Programme on " Introduction to Angular JS " conducted by ICT Academy from 24-05-2021 to 28-05-2021.

xii. Mr. R. Yaswanth and Ms. M. Likitha participated in online live Faculty Development Programme on "Introduction to Python Programming "conducted by ICT Academy from 24-05-2021 to 28-05-2021.

xiii. Mr. V. Rajesh participated in AICTE ATAL one week Faculty Development Programme on "Reinforcement Learning an it's Applications" organized by PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur from 07-06-2021 to 11-06-2021.

xiv. Mr. B. Rajesh participated in Faculty Development Programme on "Applied Data Science: Tools and Techniques" organized by LBRC, Mylavaram from 29-05-2021 to 02-06-2021.

xv. Mr. B.Vinay kumar participated in National level Faculty Development Programme on "Applications of Machine Learning" organized by Vishnu college for women, Bhimavaram from 15-06-2021 to 19-06-2021

e) **Guest Lectures : NIL**

ii. Mr. A.Vanamala Kumar, Dr. G. Lalitha Kumari, Mrs.M. Sailaja, Mrs.Y. Surekha attended NPTEL E-Awareness Workshop organized by IIT Madras, Chennai on 04-01-2021.

Student Achievements
Placements

a) Four students of IV CSE were selected in MAQ Software with a package of 6.0 LPA
b) Three students of IV CSE were selected in MAQ Software with a package of 3.8 LPA
c) One student of IV CSE got selected in EPAM with a package 6.0 LPA
d) One student of IV CSE got selected in Efftronics with a package 3.8 LPA
e) One student of IV CSE got selected in NTT Data with a package 6.0 LPA
f) One students of IV CSE got selected in Wiley with a package of 7LPA.
g) 7 students of IV CSE got selected in UHG with a package of 5LPA.
h) 6 students of IV CSE got selected in HCL with a package of 3.5LPA.
i) 4 students of IV CSE got selected in Sutherlands with a package of 2.5LPA.
j) 6 students of IV CSE got selected in Infosys with a package of 3.5LPA.

Co-curricular Activities:

a. Ms.Sk Rashidunnisa, II CSE won second prize an amount of Rs.750/- in Tech Wreck organized by the Department of Computer Science and Engineering, PVP Siddhartha Institute of Technology association with CSI Kshatragna 2021 National Level Student Convention on 27-01-2021 to 29-01-2021.through online Mode.

b. Mr. P.Yaswanthi, II CSE won third prize an amount of Rs. 500/- in Tech Wreck organized by the Department of Computer Science and Engineering, PVP Siddhartha Institute of Technology association with CSI Kshatragna 2021 National Level Student Convention on 27-01-2021 to 29-01-2021.through online Mode.

c. Ms.V Poojitha Sarada Bhavani, II CSE won second prize an amount of Rs.750/-in Riddle Trap organized by the Department of Computer Science and Engineering, PVP Siddhartha Institute of Technology association with CSI Kshatragna 2021 National Level Student Convention on 27-01-2021 to 29-01-2021.through online Mode.

d. Ms.V.Harshitha, II CSE won third prize an amount of Rs.500/- in Word Wizard organized by the Department of Computer Science and Engineering, PVP Siddhartha Institute of

Technology association with CSI Kshatragna 2021 National Level Student Convention on 27-01-2021 to 29-01-2021.through online Mode.

Participation:

a. Mr. A.Saikrishna,II CSE has participated in Data science and Ai using python organized by Pvp Siddhartha Institute of Technology association with APSSDC on 22-01-2021.

b. Mr. B Raghava, III CSE has participated in "EduSkill Riders"-online, conducted by VMware IT academy on 31-01-2021.

c. Mr.B. Yaswanth Kumar, III CSE has participated in "EduSkill Riders"-online, conducted by VMware IT academy on 31-01-2021.

d. Ms. Shaik Sana Muthaharunnisa III CSE has participated in "EduSkill Riders"-online, conducted by VMware IT academy on 31-01-2021.

e. Ms. M Kavya sree II CSE has participated in "EduSkill Riders"-online, conducted by VMware IT academy on 31-01-2021.

f. 28 students from I CSE got selected for TALENT SPRINT-WE(Women Engineers) program supported by Google from among 27,643 students.Out of 28 students 21 students are eligible for 50% of scholarship valued at Rs.1,50,000/- and 7 students are eligible for 25% of scholarship valued at Rs.75,000/-.

g. Mr.D. Ratnam, Ms. R. Harshitha, Ms. K. Sai Sukeerthi of IV B.Tech. Successfully completed their training on "Blue Prism Foundation Training" on 19-04-2021.

h. Ms. A. Kavya Mohana and Ms. B. Anvitha of II CSE completed Five days Industrial Training Program on "Deep Learning Algorithms & Applications" organized by IIPM – Kansbahal, Odisha in association with Pantech E Learning from 24-05-2021 to 28-05-2021.

i. 31 Students enrolled to "Cybersecurity Foundation Course" offered by "Palo Alto Cybersecurity Academy" and 28 Students successfully passed the test and received certificate from Palo Alto Academy. Coordinator: Mr. B.Rajesh, Assistant Professor, CSE Department, PCCSA, June 2021.

j. 4 students enrolled to Cisco Devnet Associate course offered by CCNA**.**
Coordinator: Dr.N. V. Ramana Gupta, Assistant Professor, CSE Department. June 2021.

k. 62 students successfully completed AWS academy cloud practitioner course and claimed the AWS acdemy Graduate student Badge. Coordinator: Ms. D. Swapna, Assistant Professor, CSE Department, June 2021.

Certifications:

a. 127 students were certified in **JAVA** Spoken Tutorials exam conducted by IIT Bombay.

b. Mr. G.Vimal Keerthi of II CSE secured 100% in JAVA Spoken Tutorials exam conducted by IIT Bombay.

c. Mr.M.Vamsi Krishna of II CSE secured 92.5% in JAVA Spoken Tutorials exam conducted by IIT Bombay.

d. 10 students of II CSE secured more than 80% in JAVA Spoken Tutorials exam conducted by IIT Bombay.

e. Spoken Tutorials: Students have completed the following Certification Courses offered by IIT Bombay

S.No.	Date	FOSS	No. of Participants Registered	No. of Participants Certified	Pass Percentage
1.	29 May 2021	CPP	**193**	162	**84%**
2.	29 May 2021	C	**184**	168	**91%**
3.	24 May 2021	PHP & MYSQL	**111**	95	**85%**
4.	22 May 2021	Python 3.4.3	**196**	140	**71%**
5.	22 May 2021	HTML	**116**	111	**96%**

b) Extra-curricular Activities:

a. Mr.Shaik Khaja Peer ,19501A05G7, II CSE won third place in Flag Area contest organized by PVPSIT NCC Unit on the eve of Republic Day Celebrations on 26th January 2021.

b. Ms.K. S V Charitha , 18501A0550, III CSE won first place in Public Speaking organized by PVP Siddhartha Institute of Technology association with Literary Cultural Club held on 20-01-2021 on the eve of Republic Day Celebrations.

c. Ms.K. S V Charitha , 18501A0550, III CSE won first place in Debate organized by PVP SiddharthaInstitute of Technology association with Literary Cultural Club held on 20-01-2021 on the eve of Republic Day Celebrations.

d. Ms.K. S V Charitha , 18501A0550, III CSE won first place in JAM organized by PVP Siddhartha Institute of Technology association with Literary Cultural Club held on 20-01-2021 on the eve of Republic Day Celebrations.

c) Students' Internships:

21 students of IV CSE got internship offers from CTS.

d) Student Publication:

i. Mr.Ch. V. Tejaswi, Ms.B. Sravya, Mr.D. Ratnam, Ms.A. Jeevanjali of IVth Year CSE under the guidance of Ms.T. SriLakshmi published a paper entitled "Virtual Voice Assistant" in International Journal for Research in Applied Science & Engineering Technology (IJRASET), ISSN: 2321-9653,Volume 9 Issue 6 June- 2021.

ii. Ms.Ch.Supraja, Ms.Ch.Pavani, Mr.G.Venkata Sai Ram, Mr.G.Sai Kiran of IVth Year CSE under the guidance of Ms.A.Madhuri published a paper entitled " Create a Remote-Control Application with Spotify" in International Journal for Research in Applied Science and Engineering Technology, in Volume 9 , Issue IV , June 2021 with ISSN: 2321-9653.

iii. Ms.N.Sri Charitha, Ms Y.Sai Prabha, Mr.Y.Tirumalesh, Ms.P.Vaishnavi, and Mr.V.Uday Kiran of IVth Year CSE under the guidance of Dr.S.Phani Praveen published a paper entitled " The Effective Approach for Spam Electronic Mail Discovery by Naïve Bayes Classifier Technique" in *International Journal for Development of Computer Science and Technology,* Volume 7, Issue 2, in April-May 2021 with ISSN: 2320-7854.

iv. Ms.K.Tejaswini, Ms.L.Sireesha, Ms.B.Sirisha, and Mr.K.Karthik of IVth Year CSE under the guidance of Mr.D.Lokesh Sai Kumar published a paper entitled "Cross-Platform File-Explorer with NW.JS" in *International Journal for Research in Applied Science and Engineering Technology*, in Volume 9 , Issue IV , June 2021 with ISSN: 2321-9653

e) Higher Education:

i. 8 students were qualified in GRE exam.

ii. 5 students were qualified in IELTS exam.

Department Activities:

a) **Department Activities**:
   i. Mr.Sarat Babu, Professor NIT Warangal and Mr. Venu Gopal, Professor NIT Warangal as a part of IQAC External audit visited Department for improving the quality of education.

b) **Consultancy: MOU's Signed: 6**
   i. The Department of Computer Science and Engineering entered into MOU with REDHAT, CISCO (CCNA), Amazon Web Services (AWS), Palo alto(Cyber Security), Blue Prism(RPA) Academy in the month of January.
   ii. The Department of Computer Science and Engineering entered into MOU with Celonis Academic Alliance for a period of 1 year.

c) **Department information**
   i. Dr. K. Koteswara Rao received certificate of appreciation for his excellent work as Publicity Chair for the 3rd International Conference on Computational Intelligence and Intelligent Systems (CIIS 2020) held from 13-11-2020 to 15-11-2020.
   ii. Mr. B. Rajesh completed training and certified on "Cyber security Foundation, Gateway & Essentials " by Palo alto Academy in association with Eduskills Foundation from 11-01-2021 to 15-01-2021
   iii. Mr.B.Vinay Kumar completed training and certified on "Robotic Process Automation" by Blueprism University in association with Eduskills Foundation on 23-01-2021.
   iv. Mr. N.V.Ramana Gupta completed training and certified on "CISCO (CCNA) Remote Instructor training" by CISCO in association with Eduskills Foundation from 18-1-2021 to 6-2-2021.
   v. Mrs. D. Swapna successfully completed the AWS Academy Educator Training on AWS Academy Cloud Foundations from Amazon Web services through EduSkills.
   vi. Dr. B. Janaki Ramaiah was appointed as an External Academic Auditor for the External Academic Audit held at NRI Institute of Technology, Agiripalli held on 19-04-2021.
   vii. 127 students were certified in JAVA Spoken Tutorials exam conducted by IIT Bombay.
   viii. The Department of CSE has conducted Syllabus Reviews of PVP19 Regulations (III & IV B.Tech) during the period of 10th to 19th May 2021 from 3.00PM to 5.00PM and the Department Core committee reviewed the syllabus.

BRAIN GATE TECHNOLOGY

A scientific milestone is the mind-to-movement system that concedes a paraplegic man to control a computer using only his thoughts. This landmark can be accomplished to a great extent through Brain Gate technology. The Brain system has become a boon to the paralyzed. The Brain Gate System is based on Cybernetics platform technology to sense, transmit, analyse and apply the language of neurons. The principle of operation behind the Brain Gate System is that intact brain function, brain signals are generated even though they are not sent to the arms, hands and legs. The signals are interpreted and translated into cursor movements, offering the user an alternate Brain Gate pathway to control a computer with thought, just as individuals who can move their hands use a mouse.

- Brain Gate bridges the gap between the brain and the limb. BrainGate technology consists of a sensor implanted on the brain's motor cortex and a device that analyzes brain signals. Cervical spinal cord or brain injury may have disconnected the motor cortex signals from the limb. However, if the patient still can "think" about movement, BrainGate has the potential to interpret and re-connect those signals, thus allowing the patient to move those limbs simply by thinking about it.

Working of Brain Gate Technology

- In its current form, BrainGate consists of a sensor implanted in the brain and an external decoder device, which connects to some kind of prosthetic or another external object. The sensor is in the form of a microelectrode array, formerly known as the Utah Array, which consists of 100 hair-thin electrodes that sense the electromagnetic signature of neurons firing in specific areas of the brain, for example, the area that controls arm movement. The sensor translates that activity into electrically charged signals, which are then sent to an external device and decoded in software. The decoder connects to and can use the brain signals to control an external device, such as a robotic arm, a computer cursor, or even a wheelchair. In essence, BrainGate allows a person to manipulate objects in the world using only the mind.

Success stories

HONDA ASIMO

- Honda has taken some very significant steps into what could be an absolute revolution in the human-computer interface. Honda Research Institute, Japan, has demonstrated a brain gate technology that enables a user to control an ASIMO robot using nothing more than thought. Wearing a headset containing both electroencephalography (EEG) and near-infrared spectroscopy

(NIRS) sensors, the user simply imagines moving either his right hand, left hand, tongue or feet - and ASIMO makes a corresponding movement. The system is still huge and slow, and the commands are quite crude and imprecise - but Honda's baby steps represent a huge leap in technology.

- The next step is to refine the system to work with fine motor controls, add the ability to decode non-motor brain signals and speed it all up. Then, the doors will be open for a whole range of machines that can sense your thoughts, intentions and feelings, and act directly upon them. Brain gate has staggering potential - this is just the beginning.

PARALYSIS MAN…MOVES HAND

- New research describes how the <u>BrainGate brain-computer interface</u>, combined with a functional electronic stimulation* system implanted in the arm of a Cleveland man with quadriplegia, allowed him to move his arm and hand again to eat mashed potatoes, drink water from a mug and scratch his nose.

- "For somebody who's been injured eight years and couldn't move, being able to move just that little bit is awesome to me," said Bill Kochevar, 56, who lost the ability to move below his shoulders due to a spinal cord injury resulting from a bicycling accident. "It's better than I thought it would be."

<u>ADVANTAGES</u>

1. BrainGate can remain safely implanted in the brain for at least two years.
2. Later it can safely be removed as well.
3. Spiking from many neurons the language of the brain can be recorded, routed outside the human brain and decoded into command signals.
4. Paralyzed humans can directly and successfully control external devices, such as a computer cursor using these neural command signals.

5. The speed, accuracy, and precision are comparable to a non-disabled person there is no training necessary (just the ability to think of an action).

DISADVANTAGES

Reading brain signals is not an easy task as even a simple movement, such as raising a hand, requires electrical signals from many regions of the brain. Implanted electrodes pick up just a tiny fraction of the signals from neurons that fire. It is difficult for the computer to convert these signals resulting in the cursor jiggling and making it difficult to select icons on the screen with accuracy.

CONCLUSION

The technology driving this breakthrough in the Brain-Machine-Interface field has a myriad of potential applications, including the development of human augmentation for military and commercial purposes The primary goal of this technology and devices like brain gate is to help those are who are paralyzed to perform routine activities that are part of normal human existence. The brain gate can be used to replace the memory centre in patients affected by strokes, epilepsy or Alzheimers disease.

The 'BrainGate' device can provide paralyzed or motor-impaired patients a mode of communication through the translation of thought into direct computer control.

--K.Vigneswari(18501A0554)

GALLERY

Faculty Development Program and Student workshop on "Block chain Technology" in association with Academic Interface Program, TCS,

Alumni Webinar Sequence #5 - "Getting Industry Ready" by Ms. P. Sandhya

Faculty Development Program and Student workshop on "Cyber Security" in association with Academic Interface Program, TCS, Hyderabad

Kshatragna-2021 CSI National Level Student Convention Program

A Webinar on "Web Development" by Mr.Y.V.K.Teja, Technology Analyst, Infosys Ltd, Hyderabad

A Webinar on "Role of Xml in Web Development " by Ms. B.Madhuri, Business Analyst, HCL Technologies, Hyderabad

A webinar on "Role of Algorithms in Software Development" by Mr. Faiyazthulla Shaik, Developer Systems Engineer, Tata Consultancy Services Pvt. Ltd, Hyderabad

"National Program on Technology Enhanced Learning (NPTEL) and its Benefits for Students and Staff" in NPTEL E-Awareness workshop conducted by IIT Madras