RESUME

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Objective:

To work with a reputed institution, that will provide me a good platform to utilize my teaching and administration skills and enable my career growth.

Academic Education

- Awarded the Ph.D thesis entitled "INTELLIGENT DOCUMENT IMAGE WATERMARKING SCHEMES FOR EFFECTIVE DETECTION AND CORRECTION OPERATIONS" under the guidance of Dr. Nirmala Shivanand, HOD, Dept. of CSE, JNNCE.
- Completed M.Tech in Network and Internet Engineering with an aggregate of 87.25% in the year 2007 from JNNCE.
- Secured B.E in Information Science and Engineering with an aggregate of 78.91% in the year 2003 from JNNCE

Professional Qualifications

- Possess about sixteen years of experience in the field of education (both teaching and administration)
- Thorough understanding of the subject with ability to convey the same to the students
- Good communication and comprehension abilities
- Posses knowledge about the administrative tasks that are performed within institutions.

Professional Experience and Responsibilities

• Resource person for two day workshop on "Android Application Development with Kotlin" on Mar 2019 for final and pre-final year students.

- Resource person for topic "Linuxification" in workshop for faculty and students held at Dept of ECE, JNNCE, Shivamogga during Jan 2019.
- Resource person for topic "Practicing Data science using Python" in the AICTE-ISTE approved Induction/Refresher programme during July 2018 held at JNNCE, Shivamogga.
- Conducted technical session training on C and Data Structures for placement preparation of pre-final year students on July 2018.
- Organized a two day IEEE sponsored workshop on IoT with Raspberry Pi and Arduino for MTech Students in May 2018.
- As a Dept. Forum (COSMOS) co-ordinator for the year 2013-14, conducted various student skill development activities like technical talks on Embedded Android, Cloud Computing and Big Data Analytics, Responsive Web design and Prezi.
- Working as College Coordinator for academic module of DHI software.
- Actively associated with the development and regular maintenance of College Website
- Project Coordinator for three years and also successfully organized a Project Exhibition cum Competition during June 2017.
- Working towards completion of four projects under NAIN (Smart Ambulance, AgroSecurity, Dhrusti and Roboharvesting".
- Different projects have been accepted and funded by KSCST (Years: 2017-1, 2016-1,2015-2,2011-1)
- 2 projects in year 2017 and 2018 are accepted for E-yantra project contest, IIT
 Mumbai. Project selected in year 2018 was awarded a special prize.
- Guided the students on hackathon contest held at IIT Mumbai and was awarded Innovative project award.
- Revised the study material on "OOPS with C++" for BSIT, 3rd Sem, Kuvempu University.
- Best paper award for *A new curvelet based blind sem-fragile watermarking scheme for authentication and tamper detection of digital images*, Third International Conference on Information System Design and Intelligent Applications (INDIA 2016), 8-9 Jan, 2016, Vishakapatnam

- Involved in renewal of IEEE Student Branch through the creation of memberships, arranging technical talks, workshops and student contests since last 4 years.
- Assisted and actively involved in the conduction of various national conferences and student events in the college.
- Actively coordinated Admission process this year and developed software to simplify admission process
- Assisted in college AICTE portal maintenance.
- Also developed websites for ATNCC, Kamala Nehru, B.Ed. College, Karnataka Sangha and other colleges of NES.
- Guided various UG and PG projects.
- Delivered a lecture on "Database Management Systems" under Infosys Campus connect programme, July,2009
- Delivered a lecture on "Using Qt for Application development in Linux" on 02^{nd} August, 2007 at JNNCE, Shimoga.
- Lecture on "Web security using SSL and Firewalls" at Women's Polytechnic, Shimoga.
- Conducted one week workshop on "Web Application Development with Perl" for MCA Staff and Students, JNNCE, Shimoga.
- A Lecture on "Gateways and Databases for Web Applications" on 13th
 October,2004 at Kuvempu University, Shankaraghatta, Shimoga

Software Development Activities and Tools

1. Perform VTU Result Extraction and Analysis

A tool is developed that captures result from VTU website. The results are stored in the database of college website domain. Subsequently a graphical analysis is developed using Google charting. The software interfacing module is developed using PHP and MySQL. The extraction module is developed using C# and Java.

2. Automate Examination Invigilator allocation and notification

VTU External Exams are conducted once in a semester. This requires allocation of faculty as invigilators (Room Superindents), Releivers and IDC. Different issues like no clash in duty allocation, balanced load allocation, flexibility after allocation has to be incorporated. Further summary report of allocation, signature sheet, summary of faculty allotted for a particular session

is implemented. This helps in smooth and effective conduction of examination process. The software is implemented using PHP.

3. Automate random Seating arrangement in Internals and enable notification to students

In department, 3 internal tests are conducted. A random allocation of seats to a student for each test and subject is required to ensure effective conduction of test. Further students were given a provision to check 1 hr before, the room no and deskno allotted to them for each subject. This software was implemented using PHP.

4. Enable effective Student Mentoring and Information system

An online system was developed that has 3 modules:

Module-1: Student information portal to record student details in different tabs like Personal Information, Academic Information, Activites Participated, Result data., Module-2: Mentor Coordinator portal where a mentor can allocate mentees to mentor. Enable/Disable sending of SMS for different events like IA, Attendance, Parents Meet etc. and Module-3: Faculty Portal in which faculty can upload IA and Attendance. Further faculty can also keep track of progress of allotted mentors, and communicate progress to their parent/guardians by sending SMS. This online system was implemented using PHP and MySQL.

5. Automate effective project tracking system

Final year/Mini projects in the course has to be carried out in phases. The different phase include formation of batches, submission of synopsis, Requirement Specification, Design documents, Implementation details and Report. Each stage is maintained online by team submitting the details and Coordinators tracking progress. An online portal was developed for the same to perform automatic tracking. The portal was implemented using Bootstrap, PHP and MySQL

6. App that acts as an effective study material for subject ETM

An Android app was developed that acts as an effective study material for students for theory subject ETM. The material is organized as units. Each unit has different topics and for each topic easily understandable and memorisable notes are provided. For each unit, question bank is provided with indication of importance of each question in terms of its frequency of occurrence in various exam is shown.

7. App and application for lab question selection in lab exams

In lab exam, questions has to be selected in lot. Each student should have fair and random chance for selecting questions. A web application that enables each student to pick a chit randomly and show its details with login information was developed. A similar Android App was also developed.

8. Interface for Subject selection for faculty

Each semester, faculty has to teach 1-2 subjects based on their assigned load. Selection of subjects to be taught is a major issue. Department has a streamlined set of rules balancing various issues like faculty seniority, freedom of subject selection, number of times handled and others. A web application using Bootstrapping and PHP with MySQL is developed that allows faculty to perform subject selection and coordinate themselves.

9. COSMOSPark-an online forum of the department to conduct various technical activities

To improve technical skills for students, an online platform is provided that conducts various types of technical activities like programming hackathons, debugging, writing flow charts for a scenario, finding right computer jargons, technical crosswords, jumbles and rebus. Students are given a time slot to check questions and submit solutions. This online portal is developed using PHP, Bootstrap and MySQL

10. CO-PO-PSO Attainment tool

Course Attainment is an integral part of teaching learning process. The CIE and SEE marks, mapping of Cos with PO and PSOs and number of sessions used are all captured online. An online portal is developed that takes these details in Excel and produces a comprehensive report in terms of CO-PO and CO-PSO Attainment and levels. Attainment of CO of each student is also reported. This tool is developed using PHP and MySQL.

11. Alumni website

Students and staff of department has developed an interactive alumni website. Different information related to alumini meet and events are detailed in website. A registration form for alumni is provided. Once they login, search by batch and place is provided. The system is developed using Wordpress, PHP and MySQL.

12. NES website

A static website to display information related to National Education Society using WordPress is developed by students and staff of the department. This website displays NES members, history, institution details and others.

13. Support system for college admission process

For conducting effective admission process, a support system is built that records college aspirant details and generates token number for each aspirant. The token is used in generating application for Admission, and record students admitted with Management quota. Day to day admission details are reported. SMS support system for sending different notifications from college is also enabled.

14. Support system and online maintenance for INSPIRE

INSPIRE is a novel and best practice followed by college to create and inspire budding engineers towards environment. Each year, for meritorious PU Students a workshop is conducted. Online registration for workshop and

generation of application forms for the same is implemented using PHP and MySQL.

15. Control panel for web applications lab

To conduct experiments in web applications lab, an IDE (Control panel) is developed. Students can edit, compile, run, list and upload HTML, PHP, Perl and Java Script programs through this panel. This system mimics the real world control panels provided during webhosting.

Subjects Taught

- 1. **U.G**: Python, Unix Shell Programming, Database Management Systems, Data Communications, Client Server Computing, Data Warehousing, Principles Of Programming Language, C# And .Net, Multicast Communication, Web Programming (Web 1.0 and 2.0), Unix System Programming, Entrepreneurship and Technology Management.
- 2. **P.G.:-** Network Programming, Web Services, Network Protocol Design, Multimedia Communication, Semantic Web, Advances in Database Management Systems, Semantic Web, Probability Statistics and Queuing Theory, Cyber Crime and Digital Forensics

Publication Indexing

Google Scholar Report:



Scopus Indexing Report:



DBLP Indexing:





Journal Publications

1.	Chetan K. R and S. Nirmala (2015), "An efficient and secure robust watermarking scheme for document images using Integer wavelets and block coding of binary watermarks". Journal on Information Security and Applications, Elsevier, Vol. 24, pp. 13-24
2.	Chetan K. R. and S Nirmala (2017), "Multiple Content Adaptive Intelligent Watermarking Schemes for the Protection of Blocks of a Document Image",
	Journal of Digital Forensics, Security and Law: Vol. 12: No. 4, Article 3.
3.	Chetan K. R and S Nirmala(2018), "An Adaptive Curvelet Based Semi-Fragile Watermarking Scheme for Effective and Intelligent Tampering Classification and Recovery of Digital Images", International Journal on Rough Sets Data Analysis, Vol. 5, No. 2, pp. 69-94. DOI: https://doi.org/10.4018/IJRSDA.2018040104 .
4.	Chetan K. R and S Nirmala(2019), "A Novel Contourlet Based Fragile Watermarking Scheme for Tamper Localization, Recovery and Attack Classification on Handwritten Document Images", International Journal of Engineering, Applied and Management Sciences Paradigms (IJEAM), Volume 54 Issue 1 April 2019, ISSN 2320-6608

Conference Publications

1. Chetan K. R. and S. Nirmala,(2017), "An intelligent fragile watermarking scheme based on contourlets for effective detection, localization and recovery of tampered regions in handwritten document images", International Conference on Advances in Computing, Communications and Informatics (ICACCI), Udupi, pp. 405-410. doi: 10.1109/ICACCI.2017.8125874.

- 2. Chetan K R and S. Nirmala, (2016), "Intelligent multiple watermarking schemes for the authentication and tamper recovery of information in document image", International Conference on Advanced Computing and Communication Technologies, Asia Pacific Institute of Information Technology SD, Panipat India
- 3. Chetan K R and S. Nirmala, (2016), "A novel intelligent multiple watermarking schemes for the protection of the information content of a document image", Workshop on Computer Vision Applications, IIT Guwhati
- 4. Nirmala, S and K R. Chetan. (2016). "A New Curvelet Based Blind Semi-fragile Watermarking Scheme for Authentication and Tamper Detection of Digital Images", Chapter from book Proceedings of Third International Conference INDIA 2016, Volume 2, (pp.11-20)
- 5. Chetan K.R. and Nirmala S. (2016), "An Intelligent Blind Semi-fragile Watermarking Scheme for Effective Authentication and Tamper Detection of Digital Images Using Curvelet Transforms", In: Thampi S., Bandyopadhyay S., Krishnan S., Li KC., Mosin S., Ma M. (eds) Advances in Signal Processing and Intelligent Recognition Systems. Advances in Intelligent Systems and Computing, vol 425. Springer.
- 6. Chetan K. R and S. Nirmala, (2015), "A novel intelligent robust watermarking scheme for protecting information in document images", Eighth International Conference on Advances in Pattern Recognition (ICAPR), Kolkata, pp. 1-6. doi: 10.1109/ICAPR.2015.7050680
- 7. S Nirmala and Chetan K R, *An intelligent blind semi-fragile watermarking scheme for effective authentication and tamper detection of digital images using Curvelet Transforms*, Second International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS 2015), Dec 16-19, Technopark, Trivandrum
- 8. Chetan K.R, Ujwala B.S, *An efficient DCT based fingerprinting scheme for thwarting collusion attacks*, Internet Multimedia Services Architecture and Application(IMSAA), 2010 IEEE 4th International Conference on Internet Multimedia Systems Architecture and Applications, IMSAA10, IISc, Bangalore, 15-17th Dec 2010, pp. 1-6
- 9. Chetan K.R., *A Multi-Purpose Semi-Fragile Watermarking Scheme for Digital Images*, International Journal of Advanced Networking and Applications (IJANA), Vol. 2, Issue 5, Eswar Publications, Australia, Nov-Dec 2010., pp. 656-665
- 10. Chetan K.R., Harisha S.B., *A Reversible Watermarking Scheme For Protecting Medical Images*, National Conference on Intelligent Information Retrieval, Dept. of Information Technology, PSG College of Technology, Coimbatore, 24-25 September 2010.
- 11. Chetan K.R., Raghavendra K., DWT Based Blind Digital Video Watermarking Scheme for Video Authentication, International Journal of Computer Applications, Number 10 Article 4, Aug 2010., pp. 19-26
- 12. Chetan K.R., Nikitha H.K., *An Image-Adaptive High Performance Data Hiding scheme*, National Coneference on "Convergence of Siganl Proceesing, Communication & VLSI Design", NCSCV10, SDM, Dharwad pp. 47-50, 13th, 14th August 2010
- 13. Chetan K.R., *A highly fragile Watermarking scheme for Exact content authentication of Digital Images*, International Conference on Electronic Design and Signal Processing, ICEDSP09, Manipal Institute of Technology, Manipal, 10-12th December, 2009
- 14. Raghavendra K, Chetan K.R., *A Blind and Robust Watermarking Scheme with Scrambled watermark for Video Authentication*, International Conference on Internet Multimedia Systems Architecture and Applications, IMSAA09, IISc, Bangalore, 9-11th December, 2009.(ISBN: 978-1-4244-4793-0, IEEE Catalog Number: CFP0992E, Library of Congress: 2009905371)
- 15. Ashiwni S.R, Chetan K.R., Robust Watermarking system for MPEG-2 video in DCT

	domain, First National Conference on Image Processing, Pattern Recognition and Computer
	Vision, NCVIP-2009, P.E.S College of Engineering, Mandya., 24-25 th August, 2009.
16.	Chetan K.R., Pradeep H K., Asymmetric Soft Authentication and Compression of Digital
	Images using a DCT-DWT Based Semi-Fragile Watermarking Scheme, Second
	International Conference on Cognition and Recognition, ICCR-2008, P.E.S College of
	Engineering, Mandya., 10-12 April 2008
17.	Chetan K.R., Harisha S.B., Pradeep H K., Secured colour double water marking for satellite
	images, National conference on knowledge based computing system and frontier system,
	NCKBFT – 07, Dept of CSE, MIT, Manipal,19-20 February 2007
18.	Chetan K.R., Harisha S.B., Pradeep H K., A watermarking scheme for protecting cartoon
	images, National Conference on VLSI design signal processing and communication,
	NCVSPCOM -2007, Dept of ECE, Siddaganga institute of technology, Tumkur, 17-18
	February 2007, pp. 102–106
19.	Chetan K.R., Harisha S.B., Protecting ROI of the satellite images using compression based
	colour double watermarking, First International conference on signal and image processing
	, BVB college of engineering and technology, Hubli.,7-9 December-2006, pp 52 -56
20.	Chetan K.R., Harisha S.B., A Compression Resistant and High Capacity Watermarking for
	Digital Images, National Conference on COMPUTING & COMMUNICATION, Dr.
	Mahalingam College of Engg., & Technology, Pollachi, Tamilnadu.,15-16th September,
	2006, pp.23-26
21.	Gangappa S.H., Chetan K.R., SCTP Congestion Control Under Multiple Losses, PG
	Sangama, two day technical symposium, JNN College of Engg., Shimoga.,17-18th March,
- 22	2006, pp.77
22.	Chetan K.R., Detecting Tampered Image blocks using Error Correcting code, State Level
	Paper presentation Contest, K.L.E. Society's College of Engg., and Technology,
	Udaymbag, Belgaum,28th November, 2005,pp.20-23
23.	Chetan K.R., Harisha S.B., Jagadeesha S.N., Localizing the effects of Image Tampering
	using Information hiding, National Conference on Information Security, Karunya Institute
	of Technology & Sciences (Deemed University) Coimbatore, 25-26 November, 2005,
24.	pp.173-184 Chotan V. B. Harisha S. B. Lagadagaha S. N. Staggnaggaha for the detection of Image
24.	Chetan K.R., Harisha S.B., Jagadeesha S.N., Steganography for the detection of Image
	tampering, National Workshop on Cryptology, NWC-05, JNN College of Engg., Shimoga, 12-14 August, 2005, pp.250-256
25.	Chetan K.R., Harisha S.B., Jagadeesha S.N., A Novel GUI for Fuzzy Queries, National
25.	Conference on Vision, Graphics and Image Processing., JNN College of Engg., Shimoga 2-
	3 March, 2005, pp. 579-588
26.	Shireen G.D, Sriprajna K.J, Chetan K.R., <i>A study of Fuzzy Querying System based on SQLf2</i>
20.	and SQLf3, National Conference on Emerging Trends in Communication Networks and
	Internet Applications, Adhiayaman College of Engg., Hosur, 6-7 January, 2005, pp. 44-51
	internet reprirements, rumayaman conege of Engg., Hosur, o-7 January, 2003, pp. 44-31

Workshops Attended

- One week IETE and ISTE workshop on "Research Avenues in Genomics" organized at JNNCE, Shivamogga during 17th to 21st December 2018.
- One week AICTE-ISTE approved Induction/Refresher Programme on Data Science and Classifications practicing with Python and MATLAB held during 16/7/2018 to 21/7/2018 at JNNCE, Shivamogga

- One week workshop on "Python Programming for Data Science, Cloud and Wireless Networks", organized at JNNCE, Shivamogga on 9th to 11th and 16th to 18th June 2017
- One week workshop on National Board of Education (NBA) and Outcome Based Education (OBE), organized at JNNCE, Shivamogga on 23rd to 27th Jan 2017 Two day workshop on "Cloud Computing and Big Data Analytics" organized by Govt. of Karnataka and Consortium of Electronic Industries of Karnataka on Mar 5th and 6th 2016.