

CURRICULUM VITAE



Name & Address:

Prof.N.B.Venkateswarlu
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Ratna Arcade 4th Floor,
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Date of Birth:

15th Aug, 1963

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Educational Qualifications:

Qualification	University/Institute	Duration	Remarks	Percentage/CGPA
Post Doctoral Fellowship	Univ. Of Leeds, UK	Jan 1993- Jun95	On lean from BITS, Pilani.	Not Applicable
Ph.D	BITS, Pilani	Aug 89- Dec 92	Thesis Title: Some Efficient Serial and Parallel Algorithms for Image Analysis	Satisfactory
M.Tech	IIT, Kanpur	Aug 86- Dec 88	Thesis Title: Study of Some Image Classification algorithms for Remotely Sensed images	8.3
B.Tech	SV University, Tirupathi	Aug 82- Apr 86	Civil Engineering Specialization. Secured University 5 th rank.	73.3%

Academic/Professional Work Experience:

University/Institute	Duration	Position	Remarks
BITS, Pilani	89-96	Asst Lecturer/Lecturer	Joined as Asst. Lecturer, then promoted as Lecturer and then as Asst Professor. I took leave to work as post doctoral fellow at Univ. of Leeds, UK during 92-95. Worked as Asst. Dean, Educational Development Division.
GVP College of Engg., Visakhapatnam	97-2007	Professor	Worked as Head of the department of IT.
AITAM, Tekkali	2007-2016 May	Professor	Worked as principal of the Institute. Also served as Dean, R&D.
GVP Engg College for Women	2016 Jun – till date	Professor	Professor

Other Academic Positions Held:

- Board of Studies Member, JNTU, Kakinada, A.P (2009-2012, 2006-2009).
- BOS Member, Andhra University, 2013-16.
- Adjunct Faculty, BITS, Pilani (2007-08).
- Member of NRCFOSS Center at Anna University. A “Free Open Source Software” activity funded by M.I.T, Govt of India..
- Academic Advisory Committee Member, SSIET, Nuzivid, A.P
- Technical Advisor for Roland Institute of Technology, Berhampur, Orissa.
- Visiting Professor for GIET, Gunupur, Orissa for Post Graduate Courses
- Visiting Professor for Sri Vishnu Engg. College, Bhimavaram, A.P
- Board Member to St Joseph's College (Autonomous College), Visakhapatnam.
- Visiting Professor to Andhra University, Visakhapatnam.
- Visiting Professor RVRJC College of Engg. Guntur.
- Visiting Professor GVP Post Graduate College, Visakhapatnam.

Professional Memberships:

1. National Member of Free Open Source Software (NRCFOSS), Anna University, MIT Campus.
2. Life Member ISTE.
3. Life Member Indian Society of Statistics, Computer and Applications.
4. Advisory Member, New E-Learning Initiation of S Chand Group with German Collaboration, <http://www.ventureskies.com/schandedutech/advisers.html>

Academic Achievements and awards:

1. Nominated by University Grants Commission, India for Commonwealth Academic Staff fellowships in 2011.
2. Selected by DAAD, Germany for attending/addressing a two week Winter School on "E-Learning in age of Globalization", <http://www.cedis.fu-berlin.de/en/veranstaltungen/winterschool2010/>
3. ISTE Visiting Professorship, 2010-11. <http://www.isteonline.in/?q=node/161>
4. JNMT (UK) Fellow, 92-95.
5. Got 97.13% in Graduate Aptitude Test in Engineering (GATE) which is conducted over whole India. With this score, I have joined at IIT-Kanpur.
6. 5th Rank in University during B.Tech.
7. Got 489th position out of 100000 students in Engineering Entrance test after 10+2.
8. College First in 10 + 2.

List of Publications:

1. NB Venkateswarlu & PSVSK Raju, Three Stage ML Classifier, Pattern Recognition, 23,11, 1991.
2. NB Venkateswarlu & PSVSK Raju, Winograd's Inequality: A Perspective for some PR problems, Pattern Recognition Letters, 1991.
3. NB Venkateswarlu & PSVSK Raju, Fast ISODATA clustering Algorithms, Pattern Recognition, 25:3, 1992.
4. NB Venkateswarlu & PSVSK Raju, Efficient implementation of Max-min clustering applied to remotely sensed imagery, ICORS, 1992.
5. N.B.VENKATESWARLU, P.S.V.S.K. RAJU: "Local Study Centers Location: a Location-Allocation Problem in Informal Education System", EWGLA6, Puerto De La Cruz, Spain, April 25, 1992.
6. NB Venkateswarlu, & PSVSK Raju, A new fast classifier for remotely sensed imagery, IJRS, 14:2, 1993.
7. NB Venkateswarlu & PSVSK Raju, Effective implementation of maximum clustering for remotely sensed images, IJRS, 14:17, 1993.
8. NB Venkateswarlu, S. Balaji, PSVSK Raju, & RD Boyle, Some more observations of performance of maximum likelihood classifier applied to remotely sensed imagery, Pattern Recognition, 27, 1994.
9. NB Venkateswarlu, New Dynamic Thresholding algorithm for document binarization, Electronics Letters, UK, 1994.
10. N. B. Venkateswarlu, P. S. V. S. K. Raju, Winograd's method: a perspective for some pattern recognition problems, 105 - 109, Vol 15 , No 2, Pattern Recognition Letters, 1994.
11. NB Venkateswarlu & PSVSK Raju, Reduced VLSI Architecture for clustering and some PR problems, Pattern Recognition, 1994.

12. NB Venkateswarlu, Implementation of some image thresholding algorithms of a connection machine –200, Pattern Recognition letters, 16, 1995.
13. Venkateswarlu, N B; Boyle, R D. New segmentation techniques for document image analysis. Image and Vision Computing, pp. 573-583. 1995.
14. N.B. Venkateswarlu , Various approaches to speed up Mahalanobis distance classifier, Int. J. Remote Sensing, v. 16, 3157-3163, 1995.
15. N.B. Venkateswarlu, A fast maximum likelihood classifier, Int. J of Remote Sensing, Vol. 16, No. 2, pp. 313-320, 1995.

Recent Publications:

16. N. Tirumal Rao, EV Prasad, NB Venkateswarlu, Parallelization of Data Mining Algorithms along with Memory Mapped Files on Dual-Core processors, Accepted in IJCSNS, 2009.
17. Hazarath Munaga (MHM Krishna Prasad), J. V. R. Murthy and N. B. Venkateswarlu, “A Novel Trajectory clustering technique for selecting cluster heads in Wireless sensor networks,” International Journal on Recent Trends in Engineering, ISSN 1797-9617, ISBN 978-952-5726-04-6 (Print); ISBN 978-952-5726-05-3 (CD-ROM), Issue 1, vol. 1, pp. 357 – 361, May 2009.<http://www.academypublisher.com/ijrte/vol01/no01/ijrte0101357361.pdf>.
18. Hazarath Munaga (MHM Krishna Prasad), J. V. R. Murthy and N. B. Venkateswarlu, “A Fault Tolerant Trajectory Clustering (FTTC) for selecting cluster heads in Wireless Sensor Networks,” in the International Journal of Computational Intelligence Research (IJCIR), ISSN: 0973-1873.
19. Hazarath Munaga (MHM Krishna Prasad), J. V. R. Murthy and N. B. Venkateswarlu, “Enhanced User Authentication through Trajectory Clustering,” in the International Journal on Recent Trends in Engineering, ISSN 1797-9617, ISBN 978-952-5726-04-6 (Print); ISBN 978-952-5726-05-3 (CD-ROM).
20. Hazarath Munaga (MHM Krishna Prasad), J. V. R. Murthy and N. B. Venkateswarlu, “A Hybrid Trajectory Clustering for Predicting User Navigation,” in the International Journal on Recent Trends in Engineering, ISSN 1797-9617, ISBN 978-952-5726-04-6 (Print); ISBN 978-952-5726-05-3 (CD-ROM).
21. S.N.Tirumala Rao, E.V Prasad, N.B.Venkateswarlu and G.Samba Siva Rao “Performance Evaluation of Memory Mapped Files on Dual Core Processors Using Large Data Mining Data Sets” International Journal Of Systems And Technologies Volume: 2, Number: 1, PP 137-148 2009.
22. S.N. Tirumal Rao, E.V. Prasad and N.B. Venkateswarlu “Performance Evaluation of Memory Mapped Files with Data Mining Algorithms” International Journal of Information Technology & Knowledge Management Vol-II, Issue-II PP.365-370 of Dec. 2009.
23. S.N.Tirumala Rao, E.V Prasad And N.B.Venkateswarlu “A Critical Performance Study of Memory Mapping on Multi-Core Processors: An Experiment with k-means Algorithm with Large Data Mining Data Sets”, IJFCA journal (International Journal on Futuristic Computer Applications), number 9, March 2010. www.ijcaonline.org/archives/number9/211-358.

24. B.V. Ramana, Prasada Babu, NB Venkateswarlu, A Critical Study of Selected Classification Algorithms for Liver Disease Diagnosis, IJDMS, Vol 3, No 2, pp 101-114, 2011.
25. B.V. Ramana, Prasada Babu, NB Venkateswarlu, A Critical Evaluation of Bayesian Classifier for Liver Disease Diagnosis using bagging and boosting, IJEST, Vol 3, No 4: pp 3422-3426, 2011.
26. D.J. Nagendra Kumar, JVR Murthy, NB Venkateswarlu, Some Studies of Expectation Maximization Clustering Algorithm to enhance Performance, Accepted but to come in print, IJES, 2011.
27. Ch. Ramesh, Dr.N.B. Venkateswarlu & Dr. J.V.R. Murthy, "FAST DCT ALGORITHM USING WINOGRAD'S METHOD" Accepted for publication in International Journal of Electronics and Communication Engineering and Technology (IJECET), Volume 3 Issue 1 (January- June 2012)
28. B.V. Ramana, Prasada Babu, NB Venkateswarlu, " A critical Comparitive Study of Liver Patients from India: An Explarotory Analysis", International Journal of Computer Science, May 2012 (Accepted yet to appear in print).
29. Ch. Ramesh, Dr.N.B. Venkateswarlu and Dr. J.V.R. Murthy, "A Novel K-Means Based JPEG Algorithm for Still Image Compression", International Journal of Computer Engineering and Technology (IJCET), 2012.
30. D.J. Nagendra Kumar, JVR Murthy, NB Venkateswarlu, A Critical Study of Efficient Multi-core EM Clustering, Accepted for publication in IJCA, April, 2012.
31. Ch. Ramesh, NB Venkateswarlu, JVR Murthy, A New Classification Performance aware Multi-Sensor, Multi-resolution satellite image compression technique, GJCST Volume 13 Issue 7 Version 1.0, 2013
32. Ch. Ramesh, NB Venkateswarlu, JVR Murthy, A Critical Performance Evaluation of Classification Methods with Modified JPEG Decompressed Multiband Images, Global Journal of Researches in Engineering, Volume 13, Issue 16 Version 1.0 December 2013.

Conference Publications:

1. S.N.Tirumala Rao, E.V Prasad, N.B.Venkateswarlu and B.G.Reddy "Significant Performance and Evaluation of Memory mapped files with clustering Algorithms" IADIS, International Conference on Applied Computing, ALGARVE, Portugal, pages: 455-459, April 2008.
2. S.N.Tirumala Rao, E.V Prasad, N.B.Venkateswarlu and G.Samba Siva Rao "Performance Evaluation of Memory Mapped Files on Dual Core Processors Using Large Data Mining Data Sets" ICWS-2009, International Conference on Web Sciences, School of Computing Koneru lakshmaiah College of Engineering Green Fields Vaddeswaram, Guntur-522502, A.P,India, pages: 101-108, 10-11 Jan 2009.
3. S.N.Tirumala Rao, E.V Prasad And N.B.Venkateswarlu "Parallelization Of Data Mining Algorithms Along With Memory Mapped Files On Dual-Core Processors", IEEE International Advanced Computing Conference, Patiala, India, pages: 2779-2785, 6-7 March 2009.
4. S.N.Tirumala Rao, E.V Prasad And N.B.Venkateswarlu "A Scalable k-means Clustering Algorithm on Multi-Core Architecture" IEEE International Conference On Methods And Models In Computer Science.(ICM2CS-09). December 14-15

2009.

www.jnu.ac.in

or

http://ieeexplore.ieee.org/xpl/freeaba_all.jsp?=&arnumber=5397976

5. S.N.Tirumala Rao, E.V Prasad And N.B.Venkateswarlu “A Critical Performance Study of Memory Mapping on Multi-Core Processors: An Experiment with k-means Algorithm with Large Data Mining Data Sets” , International Conference On Futuristic Computer Applications, IISc Bangalore, India, March, 2010. www.icfca.org
6. N.B. Venkateswarlu, Teaching Essential Programming Fundamentals using Trace Oriented E-Learning Modules:An experiment with Indian Students, DAAD Winter School E-Learning in the age of Globalization, CeDiS, Freie Universtat, Berlin, Nov 22-30, 2010.
7. Computation Reduction of Expectation Maximization Clustering Using Winograd's Method, D. J. Nagendra Kumar, J. V. R. Murthy and N. B. Venkateswarlu, ICECT-2012, Kanyakumari, 6-8 April 2012.

Technical Reports submitted:

1. Some Further Results of Three Stage ML Classification Applied to Remotely Sensed Images, by N B Venkateswarlu, S. Balaji, P S V S K Raju & R D Boyle Division of Artificial Intelligence March 1994 1. Available at: ftp://agora.leeds.ac.uk/scs/doc/reports/1994/94_9.ps.Z, 18 May 1994 University of Leeds SCHOOL OF COMPUTER STUDIES RESEARCH REPORT SERIES Report 93.9.
2. A New Low Complexity Distance and Its use For Vector Quantization of Images by N B Venkateswarlu & R D Boyle Division of Artificial Intelligence March 1994. Available at: ftp://agora.leeds.ac.uk/scs/doc/reports/1994/94_10.ps.Z, 18 May 1994, University of Leeds SCHOOL OF COMPUTER STUDIES RESEARCH REPORT SERIES Report 94.10
3. Fast K-MEANS Clustering Algorithms by M. B. Al-Daoud, N. B. Venkateswarlu & S. A. Roberts Division of Operational Research and Information Systems June 1995, University of Leeds, SCHOOL OF COMPUTER STUDIES RESEARCH REPORT SERIES Report 95.18.

List of data sets developed and made available to the public:

Liver patients data set which is collected for my doctoral students is made available at UC Machine Learning repository. <http://archive.ics.uci.edu/ml/datasets/ILPD+%28Indian+Liver+Patient+Dataset%29>

Editorial/Review services:

I have worked as reviewer to reputed International Journals and Conferences such as:

Pattern Recognition

Pattern Recognition Letters

International Journal of Remote Sensing

Computer Vision and Image Processing

IEE Journals

ICDM Conference

List of Conferences Attended:

1. Winter School on E-Learning in the era of Globalization, CeDis, Freie Universitat, Berlin, Nov 22 – Dec 30, 2010.
2. Online Educa, Berlin, Dec 1-3, 2010
3. BMVC Conference, U of Surrey, UK, Nov, 1994.

Books Authored:

1. Advanced Unix Programming, BS Publishers, Hyderabad, 2005. Second Revision, 2014.
2. Unix and Windows NT, BS Publishers, Hyderabad, 2005.
3. Introduction to Linux: Installation and Programming, BS Publishers, Hyderabad, March, 2006.
4. Linux Programming Tools Unveiled, BS Publ, Hyderabad, Feb, 2007.
5. Unix/Linux F.A.Q: With Tips to face Interviews, BS Publishers, Hyderabad, Aug, 2007.
6. Lecture Notes for AICTE Sponsored Seminar on “Frontiers in Classification Algorithms for Data Mining”, Dec 26-28, 2008 AITAM, Tekkali. Same is being revised as a book.
7. Unix & Shell Programming, , Reem Publ, New Delhi. 2009
8. C and Data Structures, Aug, 2009, S Chand & Co, New Delhi.
9. Learn Object Oriented Programming Using Java, S Chand, 2010.
10. C# Unveiled for beginners, Reem Publ, New Delhi, (In Press).
11. Essential Computer and IT Fundamentals for Engineering and Science Students, S Chand, 2012.
12. Lecture notes on Advanced Unix Programming, School of Distance and Continuing Education, JNTU, Hyderabad, 2011.
13. CSE & IT For GATE, McGraw Hill, New Delhi, Sep, 2013 (Went for Second reprint in 2015).
14. A bridge book for C language with Telugu Explanations, N.B. Venkateswarlu, NBV Publ, Visakhapatnam Jan 2014.
15. 101 Programming Problems Solved: Join us to win Informatics Olympiad, N.B.Venkateswarlu, Dec 2014 (Kindle edition: <http://www.amazon.com/dp/B00RFDZT2E>)
16. 101 Programming puzzle problems solved: High School Junior to Seniors Join us to win Informatics Olympiad, N.B.Venkateswarlu, Feb, 2015. (Kindle edition: <http://www.amazon.com/dp/B00T1OK42K>)
17. 2⁸ String based programming puzzles solved, N.B.Venkateswarlu,, Jan, 2016 (Kindle edition: <http://www.amazon.in/gp/product/B01AWA0AGQ?%2AVersion%2A=1&%2Aentries%2A=0>)

Books Manuscripts under development:

1. 2⁸ String based Programming Puzzles solved: Join us to win ICPC (Will be available for Kindle library in Nov, 2015).
2. Simple to Complex grid and board programming puzzles solved: Join us to win ICPC (Conceptualized for Kindle)
3. Illustrated Geometry based programming puzzles and solutions (Conceptualized for Kindle)
4. Programming Puzzles illustrated in Telugu (Under development)

5. Essential Mathematics for Preparing Programming Competitions (Under development)
6. A primer on Dynamic Programming with Programming Puzzles solved
7. Data Mining Unveiled for Beginners, Manuscript under development for Pearson.
8. Embedded Systems Design and Development: A Practical Treatise using Linux Examples, BS Publishers, Hyderabad, To be released.
9. Operating System: A problem and Program Oriented approach with emphasis on GATE and Adv GRE, Manuscript conceived for McGrawHill, New Delhi,.
10. Linux for Scientific Applications, Manuscript Conceived for Prentice Hall, New Delhi.
11. Digital Logic Design, Under review at Cambridge University Press.

E-Learning Courses developed:

1. Learn C Language in Multi-Media Way, Available for Public freely at www.ritchcenter.com/elearn.
2. Data Structures Through C, Available for Public freely at www.ritchcenter.com/elearn.
3. Unix and Shell Programming, Available for Public freely at www.ritchcenter.com/elearn.
4. Learn Object Oriented Programming Using C++, Available for Public freely at www.ritchcenter.com/elearn.
5. Learn Microsoft Windows, Available for Public freely www.ritchcenter.com/elearn.
6. Developed Video Lessons for the sake of faculty members on the use of Weka, a data mining tool which are available at www.ritchcenter.org
7. Developed lecture notes to present to the participants of AICTE sponsored workshop on Frontiers in Classification Algorithms.

Book Reviews:

1. TCP/IP Protocol Suite, Forozoun, 6th Edition, McGraw Hill, New Delhi, 2010. See my blog <http://garynuttos.blogspot.com/2011/01/review-on-book-tcpip-protocol-suite-4th.html>
2. Operating Systems, 3rd Edition, Gary Nutt, ISBN 9788131723593, Pearson Publ, 2010. See my blog at <http://garynuttos.blogspot.com/2011/01/review-on-book-operating-systems-by.html>.
3. Unix Programming and Compiler Design Lab, D. Sunitha, Submitted to BS Publishers, Hyderabad. <http://garynuttos.blogspot.com/2011/01/review-on-proposed-lab-manual-on-unix.html>
4. Multi-core programming: Increasing performance through Software Multi-threading, Shameem Akhter and Jason Roberts, Intel Press, Via BPB Pub, New Delhi. <http://garynuttos.blogspot.com/2011/01/review-on-multi-core-programming.html>

Comments/Reviews of My Books:

1. <http://sureshponduru.blogspot.com/2009/10/review-on-candds-by-nb-venkateswarlu.html>

No of DST/MHRD Projects Handled as co-investigator:

Two laboratory projects each 25 Lakhs at BITS, Pilani. One is related to Robotics and the other is related to Image Processing.

Academic Supervision and Mentoring:

No of PhD theses Guided: 8 (3 are currently pursuing).

1. **M.H.M. Krishna Prasad**, Trajectory Clustering Algorithm: A Data Mining Solution to Industrial Problems – Critical Analysis and Evaluation, JNTU Hyderabad, 2009.
2. **S.N. Tirumala Rao**, Critical Evaluation of Memory Mapped Data Mining Algorithms on Single-Core and Multi-core Processors, JNTUK, Kakinada, June, 2010.
3. **D.J. Nagendra Kumar**, Computational Improvements in Expectation Maximization algorithm for data clustering, JNTUH, 2013.
4. **Ramana Bendi**, **A Critical Study of Classification Algorithms for Automatic Diagnosis of Liver Diseases: A Case Study on Indian Hepatobiliary Data**, Mar, 2014.
5. **Chappa Ramesh**, A critical study of image compression: A pattern classification perspective, JNTUH, 2015 (Waiting for defense).

No of M.Tech Theses Guided: More than 100.

No of M.Phil Students Guided: One.

No of B.Tech Projects Guided: More than 200.

List of Referees Names & addresses:

Prof Roger D Boyle

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Address: 83 Rhoshendre, Waunfawr, Aberystwyth SY23 3PX, 01970 639229

Prof. BR Rama Mohan Gandhi

Email: brgandhi@yahoo.com

Tel: 918912747680

Address: 303 C, KAILASH KUNJ, PEDAWALTAIR, VISAKHAPATNAM, AP, INDIA

Courses Taught at Graduate & Under Graduate Level:

Pattern Recognition, Image processing, Introduction to Robotics, Computer Networks, Operating Systems, Distributed Operating Systems, Data Communication, Numerical Analysis, Compiler Construction, Neural Networks, Computer Graphics, Database Management Systems, C Prog, Object Oriented Prog. Systems, Data Structures, Unix

Internals, Unix & Shell Programming, TCP/IP Prog, Information Technology, Remote Sensing, AI, Advanced Computer Architecture, Design and Analysis of Algorithms, Graph Theory, Programming in C#.NET, Programming in PHP,

Corporate Training Experience:

I did train many management trainees of Visakhapatnam Steel Plant on Programming Languages, etc.,. In fact, some of them were doing their DOEACC C level course which is equivalent to Masters in Computer Science.

I have trained scientists of Naval Scientific Technological Laboratories, NSTL, in C, C ++, and Visual C ++.

Achievements of My Students:

1. Ms. Stephine Fountain won Softwright Innovation Award for her OCR system developed under my guidance in 1995.
2. Ms. Kiranmayi Won 1st prize at National Level Examination of IGNOU in 2004 for her outstanding performance in Computer Architecture. I am a tutor for this course.
3. Ms. Aruna Padma won best MCA thesis at IGNOU during 2001-2002.
4. Mr. Mohan, Mr. Anjaneyulu, Mr. Sarma won best prize for their outstanding performance in C language and prizes are conferred by Mr. Y. Kanetkar, a famous book writer on Computers in India.
5. Mr. Dara N Raju got Infosys Internal Award, 2005. raju_dhara@infosys.com
6. Mr. Vikram Reddy got Infosys Internal Award, 2007.
7. Mr. Nanda got Rashtriya Sadbhavana Award. nandadps9@yahoo.co.in .

A Glimpse of My Social Activities During 1996 to 2010:

Soon after my return from U of Leeds, I have conceptualized to develop an education center in Visakhapatnam which is formally initiated in 1996.

I have started lecturing to masses with nominal fee towards organizations incidental expenses. During 1996, awareness on computers was very meager in India. Thus, sooner I am able to extend my services to good number of students.

In fact, during the last 15 years period I have trained more than **50000, fifty thousand** students in and around Visakhapatnam, India. More than few thousands are placed in MNCs, do visit my site www.ritchcenter.com.

My Blogs:

1. <http://enggstudentstoday.blogspot.com/>
2. <http://needforatesttotestyoungenggfaculty.blogspot.com/>
3. <http://garynuttos.blogspot.com/>
4. <http://jntukfirstyearsyllabus.blogspot.com/>
5. <http://parameterpassinginc.blogspot.com/>
6. <http://jntucurriculum.blogspot.com/>
7. <http://ritchcenter.blogspot.com/>

My Achievements

Teaching Achievements

Do find enclosed teaching statement contains information about some of my teaching achievements in addition to the following.

During 2007-10, I was active in developing E-Learning courseware for various courses such as C, Data Structures, Unix/Linux, Fundamentals of Computers, C++. I would be delighted to continue to use them.

I am ardent supporter of puzzle based learning. During last few years, I am visiting many colleges around AP to encourage students to involve in programming competitions such as International Collegiate Programming Contest(ICPC), Google Code Jam, etc. I am trying to prepare a batch for ICPC and other international coding competitions. In order to encourage students, I have scribbled two e-books on Programming Puzzles and available for Amazon Kindle KDP.

While I was working at GVP, myself along with Prof EV Prasad, Dr JVR Murthy started bringing academic dynamism in Computer Science around northern coastal districts of AP by organizing workshops, refresher courses. This I always consider as my major contribution to society, and especially Computer Science. My detailed CV contains details of our activities.

Unlike other engineering disciplines, Computer Science is young and thus lacks experienced professors. This is very true in Andhra Pradesh also. I took mentoring young faculty as one of my important responsibility. I spend my time either in online or otherwise interacting with young Computer Science faculty and clarify their subject doubts, their Ph.D dilemmas, etc.

A well known fact which Indian higher education is facing is acute shortage of trained, experienced engineering faculty. Rather, I can openly say that majority of course load in majority of colleges are taken by a faculty who joined yesterday. First, this young faculty is young and lacks teaching skills. Thus, I always advocates need for orienting them to dogma of teaching before sending them to class. While I was heading IT department at GVP Engineering college, I have organized “Intensive Teaching Workshop” to our faculty along with two of my Senior colleagues Prof BRM Gandhi and Prof MJ Rao.

Research Achievements

Do find enclosed research statement which is having details about my research achievements.

Professional and other Achievements

1. AITAM Engineering College got NBA accreditation during my tenure as Principal.
2. I served as Board of Studies member for many Universities such as Andhra Univ., JNTU, Anna Univ.

My Research Statement

My passion to teaching always kept me as a teacher rather than a full fledged researcher. Thus, I always project myself as a successful teacher rather a researcher. After my post doctoral studies, I have spent 75% of my time on teaching and writing books.

Past

My master's thesis involves comparison of various classification algorithms such as maximum likelihood, modified maximum likelihood, Mahalanobis, Euclidean, Nearest Neighbor in classifying remotely sensed images.

My doctoral thesis entitled "Some Serial and Parallel Algorithms for Image Analysis" embodies various approaches to reduce computational cost of popular image classification algorithms in addition to analyzing them for parallel implementation. It also contains a proposal to implement popular K-Means algorithm in VLSI systolic array. My detailed bio-data contains details of published research papers in Pattern Recognition, Pattern Recognition Letters, etc.

During my tenure at BITS, Pilani I was co-investigator in two laboratory development projects related to Robotics, Remote Sensing and Image Processing.

During my post doctoral work at School of Computer Studies, University of Leeds, UK, I was working on OCR of Telugu characters. I have proposed dynamic binarization algorithms which uses local information. Some them are appeared in Electronics letters, Computer Vision, Graphics and Image Processing. I did work on parallelizing image processing algorithms on Connection Machine which was available at University of Edin Burgh.

I am not doing any active research during 1997-2007. During this period I was little occupied with development of departments at GVP Engg. College in addition to working in a private training institute in grooming local students around Visakhapatnam for IT jobs. During this period I have got more satisfaction as a teacher. Thousands of students under gone my classes on various industry related computer courses and joined in IT industry.

Mr. Krishna Prasad, a regular faculty member of JNTU has worked with me for his Ph.D on "Trajectory Clustering algorithms applied to web mining". He has awarded his Ph.D degree in 2009.

When Mr. Tirumarao has started his doctoral work, again I started rejuvenating my interests in research. His work mainly involves fast data clustering algorithms and scalability study of their implementation on multi-core machines using OpenMP, Posix Threads. Mr. Tirumalao work is defended in 2010.

Along with Mr. Nagendra, I was involved in improving Expectation Maximization algorithm and proposing new variants of the same for large data sets. We were also involved in analyzing these algorithms in implementing multi-core machines. Mr. Nagendra submitted this research to JNTU Hyderabad for his Ph.D which was defended in 2012.

Mr. B.V. Ramana and myself along with Prof Babu of Andhra Univ. have studied in the development of automatic liver disease diagnosis system. Mr. Ramana has submitted this work to Andhra University and got his Ph.D in 2015.

Mr. Chappa Ramesh under my guidance submitted his work to JNTU Hyderabad which involves critical study of Image Compression on Image classification. We have developed efficient codec's in this study. This work was submitted by Mr. Ramesh as his Ph.D work and we are waiting for his Ph.D defense date. All ready all the three reports have arrived.

Present

Currently, one Ph.D student is investigating the use of Winograd's algorithm in various Engineering application domains in addition to its implementation on multi-core and GPU computers.

Another Ph.D student is actively involved in the development of Efficient Expectation Maximization algorithm for large data bases.

Currently one doctoral student and myself are involved in a DST project that is aimed at using remotely sensed imagery for watershed development.

Future

I would like to spend my energies in the following directions if they match with Institutes goals and objectives:

1. Developing high performance computing center. Initially, I want this to be used for perusal of under-graduate students of the Institute. At a later stage it should become center of excellence that can be used by all departments such as mechanical engineering, electrical engineering and also in solving big data problems. This is my interest for next 5 years.
2. I am building my skills in Cognitive Science in the recent years. I have observed its importance in many US universities and I am of strong opinion that research in this area is going to give major breakthroughs. Thus, I prefer to build research facilities in this area and continue research. This is my long term goal.

My Teaching Statement

I have developed passion towards teaching after my admission into Masters at IIT, Kanpur; before that I used to have long standing plan to become an IAS officer. I attribute this change to IIT culture, faculty and facilities. In fact, this interest made me to test my suitability as a teacher by immediately joining BITS, Pilani as a faculty even though I have got an opportunity to join Ph.D soon after my Masters. Another vital dimension has added to my career while I was at IIT, Kanpur. That is, my migration to Computer Science from Civil Engineering. Though seed for this change took place at IIT, Kanpur, my BITS, Pilani tenure made me a full-fledged Computer Scientist.

My philosophy of teaching has evolved continuously through my teaching assignments at BITS, Pilani, University of Leeds, UK and two private colleges of Andhra Pradesh. I am lucky to teach so called 'brainy' students of India at BITS, Pilani, during late 80's and also un-motivated, non-focused students from rural India during the last few years. Moreover, my teaching assignments at a private training institute are also instrumental in framing my teaching philosophy.

I strongly believe in the importance of education for better society. Also, I believe the knowledge which a scientist or researcher gained through his/her research is valuable only when it is shared with others and used for the betterment of generations. Moreover, I feel that being a teacher I am the prime conduit to transfer knowledge to generations. Also, as a teacher my goal is to facilitate students so as to become independent critical thinkers and researchers. I try to encourage and challenge my students, foster critical thinking, and pass on the inspiration which I have received from my teachers and role models. In my classes, I create an environment in which students are made to understand concepts and acquire skills by posing questions.

I am a kind of person who believes that marvelous researchers need not be excellent teachers; also excellent teachers are not guaranteed to be world grade researchers. Also, I believe that teaching is different from lecturing. I consider I am teacher, rather want to be a 100% teacher. In addition, I believe that not only students acquire knowledge from teachers but also a teacher gains some form of knowledge from students which may help the teacher in taming his teaching style or furthering his interest in his research area. There is nothing more inspiring to a teacher than the look in the eye of a student experiencing that "aha" moment. Often, during my interactions with young fellow colleagues, I advocate them to see students eyes light up when they comprehend a new concept. To be a good teacher, one has to continuously put efforts to increase this "aha" feeling among the students.

During my 27 years of teaching, I have taught variety of Computer Science courses ranging from advanced courses to first level courses. With this wide teaching experience and at the request of **Mc Graw Hill** people, I have published a book which helps students to prepare for their GATE CSE/IT examination. I have more fascination towards Programming, Mathematics, Algorithms related courses. I taught C language to more than **50 thousand** students (This number includes students of a private Institute) during last 20 years. During my lectures, I employ **trace driven** approach in illustrating how a program works. I did use

this approach and also feedback of thousands of my students and written a book on C and Data Structures which is published by **S Chand and Co.**

My teaching philosophy is highlighted by the following points.

- I believe that students get more from a lecture if they get habituated to writing running notes. Thus, I still continue to use black board (in fact a white board with marker pen) in majority of my lectures which I believe that it gives sufficient time to the student not only to copy but also to think and debate during lecturing.
- I strongly believe that it is very important to give “big picture” (holistic view) of what they are being taught first before narrow down into a theme. For instance, I spend at least 3-4 lectures in courses such as Pattern Recognition, Data Mining, Image Processing only on illuminating what is the importance of the course, it’s relevance in addition to its chronological developments. If students understand the relevancy and importance of a topic, they will develop more interest on the theme. In addition, this big picture allows students to create analogies and relations between what they are learning and what they already know. Moreover, at least 10-15% my lecture involves bridging the links between courses (subjects). I always encourage my students to develop holistic view for Engineering and Science. This helps the student in improving their appreciation of Computer Science and develop inter disciplinary perception.
- I advocate and employ Example oriented and Mathematical oriented treatment to inculcate more interest in students. For instance, while teaching Programming I take many mathematical concepts and give emphasis on where they are practically used in Engineering practically and then let them to code. Consider area calculation formulas such as Simpson rule, Trapezoidal rule etc. I give live examples such as its use in Civil Engineering in computing earth work volumes; how a safety pillow gets flipped in a car when an accident takes place (with the use continuously recorded modern automobile accelerometer data).
<http://www.slideshare.net/venkatritch/appreciationof-mathematicsmy-observations-and-opinions>
- I employ and encourage use puzzle based learning in my courses. I always try to introduce simple puzzles where ever possible to make my students more interested in the subject. For instance, recently I have addressed a group of faculty members and enlightened them on how to use puzzles while teaching data security.
<http://www.slideshare.net/venkatritch/nbvtalkatbzaonencryptionpuzzles>
- I do not believe in spoon feeding the students with the exception of their initial days of their admission. I believe that a good teacher has to give enough input such that students really live (or drive) on their own. Especially, I believe that in a field like Computer Science, students learn much better if they are encouraged to discover the answers on their own, through trial and error, rather than clarifying or explaining all of their questions such as “How do I do this”.
- I try to mimic one of my favorite teachers in using few, new English words during my lectures. Many students have appreciated this. Recently, one of my classmates who sat in my class expressed a feeling that “I am following some of our teachers”. I simply nodded with “Yes”. I do emphasize both written and verbal communication during my teaching.

I was able to do many teaching/learning experiments while I was at BITS, Pilani because of its robust academic system and good standing students.