

CURRICULAM VITAE

KUMAR RAHUL (B.Tech, M.Tech)

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CURRENT POSITION

Asst. Prof. **May 2013 to present**
Computer Science and Engineering Department, VVIT Purnia-854301, Bihar, India

CONTACT INFORMATION

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DATE OF BIRTH

March 28, 1988

CITIZENSHIP

Indian

RESEARCH INTERESTS

Image Processing, Data Compression

TEACHING INTERESTS

Image Processing, Theory of Automata, Digital Electronics, Data structures and algorithm, Computer Graphics, Information and Coding Theory, Computer Networks

EDUCATION

Master of Technology (M.Tech) **July 2011 to May 2013**
Indian School of Mines, Dhanbad – 86004, India

- In Computer Application with GPA 8.41/10.
- Dissertation Title: Color Image Quantization using DBSCAN & K-means Algorithm.
- Supervisor: Dr. Arup Kumar Pal

Bachelor of Technology (B.Tech)**July 2007 to May 2011***ICFAI University Dehradun, Dehradun, India*

- In Computer Science and Engineering with GPA 7.63/10.

Intermediate**April 2003 to April 2005***A. N. Inter College, Dumka – 814101, Jharkhand, India*

- Board: Jharkhand Academic Council
- Major Subjects: Physics, Chemistry, Math's
- Percentage: 61.66

Matriculation**April 2003***S. S. High School, Maheshpur Raj – 816106, Jharkhand, India*

- Board: Jharkhand Secondary Examination Board
- Percentage: 53.2

TEACHING EXPERIENCE**Teaching Assistant at ISM Dhanbad****July 2012 to December 2012**

- Lab for Computer Programming with C to the 2012-16 Batch of B.Tech.
- Lab for Parallel and Distributed Computing to the 2009-13 Batch of B.Tech.
- Taught Theory of Computation to the 2010-14 Batch of B.Tech.

Teaching Assistant at ISM Dhanbad**January 2013 to May 2013**

- Lab for Computer Programming with C to the 2012-16 Batch of B.Tech.
- Lab for Information and Coding Theory to the 2009-13 Batch of B.Tech.
- Taught Computer Vision to the 2009-13 Batch of B.Tech.

At VVIT Purnea**July 2013 to Present**

- Computer Graphics to the 2010-14 Batch of B.Tech.
- Lab for Computer Graphics to the 2010-14 Batch of B.Tech.
- Computer Networks to the 2011-15 Batch of B.Tech.
- Formal Language and Automata Theory to the 2011-15 Batch of B.Tech.
- Computer Architecture to the 2011-15 Batch of B.Tech.
- Operating System to the 2012-16 Batch of B.Tech.
- Image Processing & GIS to the 2011-15 Batch of B.Tech.

ACHIEVEMENTS

- Received 98.24 Percentile in the Computer Science category of Graduate Aptitude Test in Engineering (GATE), held in February 13, 2011.
- Representative of M.Tech Computer Science and Engineering Department.
- Member of Computer Science and Engineering Society, ISM Dhanbad.

- Have been an active organizer of many technical as well as cultural events in the college.
- Have been the part of college Cricket teams and won many laurels

FELLOWSHIPS AND GRANTS RECEIVED

- GATE Fellowship during the study of M.Tech in *ISM Dhanbad*, Dhanbad – 826004, India from July 2011 to May 2013 (on the basis of GATE (CS) percentiles score 98.24 earned in March 2011).

CONFERENCE OR SEMINAR ORGANIZED

- Organized a seminar “*Technical and Business paper presentation - 2013*” at Vidya Vihar Institute of Technology, Purnea as a Convenor.
- Organized “*National Conference of Information Science and Technology (NCIST – 2014)*” at Vidya Vihar Institute of Technology, Purnea as a Convenor.

ATTENDED PROGRAMS

- 1st International Conference on **Recent Advances in Information Technology**, RAIT-2012.
- 2nd National Conference on **Emerging & Innovative Trends in Computer Science**, NCEITCS-2013.

INTERNSHIPS

- Six months training (July – Dec 2010) done at “**RAJGHAT POWER HOUSE (DELHI)**” on SAP - ABAP module and completed a project on “**CREATING BIODATA USING ABAP**”.
- Summer training from (May – July 2009) at **RANE ENGINE VALVES LTD. “HYDERABAD**” and made a report on “**QUALITY PARAMETER DURING MACHINING OF VALVES**”.

COMPUTER PROFICIENCY

- *Language Known:* C, C++
- *Application Tool:* MATLAB, AUTOCAD, DEV CPP (Windows Programming), Open GL, Network Simulator (NS), RSA (Rational Software Architect), MPI (Message Passing Interface), ORACLE, DOT NET, SAP (ABAP MODULE)
- *Operating System:* Windows, UNIX
- *Theory knowledge:* Image Processing, Theory of Automata, Computer Networks, Digital Electronics, Operating System, Computer Graphics.

During **M.Tech** at Indian School of Mines, Dhanbad

Jul 2012 to May 2013

- ❖ **Topic:** *Color Image Quantization using DBSCAN & K-means Algorithm.*
- ❖ **Guide:** Dr. Arup Kumar Pal, Asst. Prof., ISM Dhanbad.
- ❖ **Abstract:** The performance of any color image quantization depends on the construction of a proper color palette and this construction process is computationally expensive. We had proposed a color palette design algorithm where we had incorporated two different types of clustering algorithms like DBSCAN and K-means. Initially, we have decomposed the color image into several non-overlapping blocks and subsequently we have employed DBSCAN on each block. This process has concerned for some sort of initial screening of representative color pixels. Further, we have obtained the desired size of color palette employing K-means on the earlier selected representative color pixels. We have tested the proposed scheme on a set of benchmark test images and we have obtained the satisfactory results in terms of the visual quality of the reconstructed images. In case of designing the color palette, the proposed scheme requires less computational time compare to the conventional K-means algorithm.

LIST OF PUBLICATIONS

A. Book Published

1. Book titled “*Proceedings of Technical and Business Paper Presentation - 2013*”, ISBN: 978-81-925776-6-1.
2. Book titled “*Proceedings of National Conference on Information Science & Technolgy 2014 (NCIST-2014)*”, ISBN: 978-81-925776-9-2.

B. International Journal Publication

1. Suman Kumar Bhattacharyya & **Kumar Rahul**, “*Face Recognition by Linear Discriminant Analysis*”, International Journal of Communication Network Security, ISSN: 2231 – 1882, Volume-2, Issue-2, 2013, pp 31-35.
2. **Kumar Rahul**, Suman Kumar Bhattacharyya & Rohit Agrawal, “*Color Image Quantization Using GDBSCAN*”, International Journal of Communication Network Security, ISSN: 2231 – 1882, Volume-2, Issue-2, 2013, pp 51-53.
3. **Kumar Rahul**, Rohit Agrawal, Arup Kumar Pal, “*Color Image Quantization Scheme Using DBSCAN with K-means Algorithm*”, Special issue of International Journal of Computational Intelligence Studies, Inderscience Publishers. (Selected for Publication through Springer Conference)

4. Rohit Agrawal, **Kumar Rahul** & Arup Kumar Pal, “A Steganography Scheme on JPEG Compressed Cover Image with High Embedding Capacity”, Computers & Security (Elsevier). (Under Review)

C. International Conference Publication

1. **Kumar Rahul**, Rohit Agrawal, Arup Kumar Pal, “Color Image Quantization Scheme Using DBSCAN with K-means Algorithm”, International Conference on Advance Computing Networking and Informatics (ICACNI-2013), ISSN: 2194-5357, ISBN: 978-81-322-1665-0.

D. National Conference Publications

1. Suman Kumar Bhattacharyya, **Kumar Rahul**, “Face Recognition by Linear Discriminant Analysis”, National Conference on Emerging & Innovative Trends in Computer Science (NCEITCS – 2013), pp 87-91.
2. **Kumar Rahul**, Suman Kumar Bhattacharyya, Rohit Agrawal, “Color Image Quantization Using GDBSCAN”, National Conference on Emerging & Innovative Trends in Computer Science (NCEITCS – 2013), pp 97-99.

REFERENCES

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Mr. Sumit Kumar
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DECLARATION

I hereby solemnly declare that all the statements made above are true and correct to the best of my knowledge and belief.

Date: 17/09/2014
Place: Purnia

A photograph of a handwritten signature in blue ink on a light-colored surface. The signature appears to be 'Kumar Rahul' written in a cursive style.

(Kumar Rahul)