
Jayant Kumar

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RESEARCH INTERESTS

Computer Vision and Machine Learning

EDUCATION

PhD Candidate in Computer Science Dept.

Fall 2008 Onwards

University of Maryland College Park

- Advisors : Dr. David Doermann and Prof. Larry Davis
- Current GPA : 4.0/4.0

BE in Computer Science and Engineering

Sept. 2002 - May 2006

R V College of Engineering, Bangalore

- Aggregate percentage (8 semesters): 77.50 % (First Class with Distinction)

WORK EXPERIENCE

Graduate Research Assistant

Aug 2008 - Till Date

Language and Media Processing Lab

University of Maryland College Park

- Currently working on Document image enhancement and segmentation techniques, text detection in noisy documents and evaluation of these methods

Research Assistant

Feb 2007- June 2008

Medical Intelligence & Language Engineering (MILE) Lab

Indian Institute of Science, Bangalore

- Worked for a research project titled - *Online Handwriting Recognition for Indian Languages*. Funded by Ministry of Information Technology, India
- Worked for a research project titled - *Field Extraction from Document Images*. Funded by First Indian Corporation (FIC), Bangalore, India

Development Engineer

July 2006 - Jan 2007

Aditi Technologies, Bangalore

- Worked for the Change Requirements related to a product called *Infospace Mobile Search*.
- Designed and implemented modules for addition of a new content source called *Yellow pages*.
- Development environment : *C# and .NET 2.0, ASP.NET, XML and XSL-transforms*

PUBLICATIONS

- **Jayant Kumar**, W. Abd-Almageed and David Doermann, "Handwritten Arabic Text Zone Detection using A Shape Codebook", Intl. Conf. on Image Processing (ICIP 09), 2009.(Submitted).
- W. Abd-Almageed, **Jayant Kumar** and David Doermann, "Page Rule-Line Removal using Linear Subspaces in Monochromatic Handwritten Arabic Documents", Intl. Conf. on Document Analysis and Recognition (ICDAR 09), 2009. (Accepted for publication).
- A. Srivastav, **Jayant Kumar**, "Text Detection in Scene Images using Stroke Width and Nearest-Neighbor Constraints", In proc. of IEEE TENCON 2008 19-21 Nov. 2008 Page(s):1 - 5, Hyderabad, India (Oral)
- **Jayant Kumar**, T Kasar, and A G Ramakrishnan, "Edge-based Connected-Component Approach for Skew Correction of Complex Document Images", In proc. of IEEE TENCON 2007, Oct. 30 -Nov. 2 2007, Page(s):1 - 4, Taiwan (Oral)

- T Kasar, **Jayant Kumar**, and A G Ramakrishnan, "Font and Background Color Independent Text Binarization", Proc. of 2nd Intl. workshop on Camera Based Document Analysis and Recognition (workshop of ICDAR), pp 3-9, 2007, Brazil, [http : //www.m.cs.osaka.fu - u.ac.jp/cbdar2007/](http://www.m.cs.osaka.fu-u.ac.jp/cbdar2007/) (Oral)
- Arvind K R, **Jayant Kumar**, A G Ramakrishnan, "Line removal and Restoration of Handwritten strokes", In proc.of Intl. Conf. on Computational Intelligence and Multimedia Applications, 2007, Volume: 3, page(s): 208-214, Sivakasi, India (Oral)
- Arvind K R, **Jayant Kumar**, A G Ramakrishnan, "Entropy based skew correction of document images", 2nd Intl. Conf. on Pattern Recognition and Machine Intelligence, pp. 495-502, Lecture Notes in Computer Science, Vol. 4815 Springer 2007 (Poster)

INTERNSHIP

Project Intern

Feb 2006 - May 2006

NonStop Enterprise Division, Hewlett Packard, Bangalore

- Undertaken BE final year project - *Parallelization of Samba on NonStop/OSS*
- Development environment : *gcc, HP NonStop Operating System, Linux*

TECHNICAL REPORTS

- Jayant Kumar, "Genetic Programming tool for Explicit Rule Extraction", Computer Science and Engineering, R V College of Engg.(2006)
- Jayant Kumar, Kiran Raj, "Parallelization of Samba on NonStop/OSS", NonStop Enterprise Division, Hewlett Packard (2006)

SKILLS

- Programming Languages - C, C++, Familiar with C#, Java
- Libraries - C++ Standard template Library, Microsoft Foundation Classes
- Familiar with OpenCV Library, DOCLIB library (UMD),LibSVM
- MATLAB - Linear algebra, Image Processing Toolbox, LibSVM, NN toolbox, PRtools, DDtools

ACHIEVEMENTS & HONORS

- Qualified National Level Mathematics Olympiad (1999) with 84%
- Secured All India Rank - 406 in Common Entrance Test 2002, Karnataka, India
- Qualified Indian Statistical Institute (ISI - 2002) entrance exam for B. Maths with All India Rank - 18
- Secured 100% marks in Engineering Mathematics in first year(2002-03) of BE
- Secured highest marks (98%) in University in subject - Concepts of C programming
- Third rank in Computer science department with 92% marks in First year of BE
- Executive Director of Vritanth (2004-06) - Department Club of Computer Science
- Editor of *Souvenir*, Computer Science department Technical Fest Magazine(IOTA - 2005)

EXTRACURRICULAR ACTIVITIES

- Member of *Computer Society of India(CSI)*, 2004-2006
- Attended Landmark Education programs - *Landmark Forum and Advanced Course*, 2007
- Assisted Landmark Education's Excellence Seminar series (Sept. 2007 - Nov. 2007) as Production Team member

RELEVANT COURSES

- *Image Understanding, Fall 08* - Prof. Rama Chellappa
- *Neural Computation, Fall 08* - Prof. James A. Reggia
- *Approaches to Representing and Recognizing Objects, Spring 09* - Prof. David Jacobs
- *Design and Analysis of Computer Algorithms, Spring 09* - Prof. S. Khuller