Praveen **Krishnan**

PhD Candidate in CSE

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Summary

I am a PhD student at **IIIT Hyderabad**, working under **Prof. C.V. Jawahar**. My research focuses on the problem of information retrieval from scanned handwritten/printed document image collections.

RESEARCH INTERESTS: Computer Vision, Information Retrieval, Machine Learning and Document Image Analysis.

Education

International Institute of Information Technology, Hyderabad — *Hyderabad*

PhD Candidate in CSE (*CGPA: 8.22*) — *2013-Present*

Amrita School of Engineering, Amrita University — *Coimbatore*

M.Tech. in Computational Engineering and Networking (*CGPA: 8.6*) — *2009 - 2011*

Amrita Institute of Science and Technology, Kerala University — *Kollam*

B.Tech. in Information Technology (*CGPA: 7.41*) — *2003 - 2007*

D.A.V Public School, CBSE Board — *Ghaziabad*

12th (*Percentage:* 68.6%) — *2003*

D.A.V Public School, CBSE Board — *Ghaziabad*

10th (*Percentage:* 82.2%) — *2001*

Experience

Center for Visual Information Technology, IIIT Hyderabad — *Hyderabad*

Research Assistant — *Jan'12 - Present*

Role: Involvement in Lab Projects and undergraduate and dual degree students.

Computer Science Department, Amrita School of Engineering — *Coimbatore*

Faculty Associate — *July'11 - Dec'11*

Role: Taught one course to undergraduate final year students and helped in conducting labs.

Tech Mahindra Limited — *Pune*

Technical Associate — *June'07 - June'09*

Role: Software Development and Support.

Awards & Fellowships

Aug'18-Present	**Amazon Alexa Fellow**	
April'18	**IAPR Nakano Best Paper Award at DAS'18**	*Vienna*
Oct'16	Google Travel Grant to attend ECCV'16	*Amsterdam*
July'13-18	TCS Research Fellow	
Jan'12-July'13	IIIT Institute Fellowship	
July'09-11	GATE Scholarship	

Publications

Note: Total Citations: 116, h-index: 6 and i10-index: 4 (Source Google Scholar on Mar'19)

Journals (Under Submission)

1. **Praveen Krishnan** and C.V. Jawahar, *HWNet v2: An Efficient Word Image Representation for Handwritten Documents*, Under Review in IJDAR.
2. **Praveen Krishnan** and C.V. Jawahar, *Bringing Semantics in Word Image Representation*, Under Review in PR.

Conferences

1. **Praveen Krishnan**, Kartik Dutta and C. V. Jawahar, *Word Spotting and Recognition using Deep Embedding* (Oral, Best Paper Award), DAS 2018.
2. Kartik Dutta, **Praveen Krishnan**, Minesh Mathew and C. V. Jawahar, *Towards Spotting and Recognition of Handwritten Words in Indic Scripts* (Oral), ICFHR 2018
3. Vijay Rowtula, **Praveen Krishnan**, C. V. Jawahar, *POS Tagging and Named Entity Recognition on Handwritten Documents*, ICON 2018.
4. Kartik Dutta, **Praveen Krishnan**, Minesh Mathew and C. V. Jawahar, *Improving CNN-RNN Hybrid Networks for Handwriting Recognition* (Oral), ICFHR 2018.
5. Kartik Dutta, Minesh Mathew, **Praveen Krishnan** and C. V. Jawahar, *Localizing and Recognizing Text in Lecture Videos*, ICFHR 2018.

6. Kartik Dutta, **Praveen Krishnan**, Minesh Mathew and C. V. Jawahar, *Offline Handwriting Recognition on Devanagari using a new Benchmark Dataset* (Oral), DAS 2018.
7. Kartik Dutta, **Praveen Krishnan**, Minesh Mathew and C. V. Jawahar, *Towards Accurate Handwritten Word Recognition for Hindi and Bangla* (Oral), NCVPRIPG 2017.
8. **Praveen Krishnan** and C. V. Jawahar, *Matching Handwritten Document Images*, ECCV 2016.
9. **Praveen Krishnan**, Kartik Dutta and C. V. Jawahar, *Deep Feature Embedding for Accurate Recognition and Retrieval of Handwritten Text* (Oral), ICFHR 2016.
10. Anshuman Majumdar, **Praveen Krishnan** and C. V. Jawahar, *Visual Aesthetic Analysis for Handwritten Document Images*, ICFHR 2016.
11. **Praveen Krishnan**, Ravi Sekhar and C. V. Jawahar, *Towards a Robust OCR System for Indic Scripts*, DAS 2014.
12. **Praveen Krishnan** and C. V. Jawahar, *Bringing Semantics in Word Image Retrieval*, ICDAR 2013.
13. **Praveen Krishnan**, Ravi Sekhar and C. V. Jawahar, *Content Level Access to Digital Library of India Pages* (Oral), ICVGIP 2012.

Preprints

1. **Praveen Krishnan** and C. V. Jawahar, *Generating Synthetic Data for Text Recognition*, arXiv preprint arXiv:1608.04224 2016.

Selected Academic Projects

- Large scale image search engine (Computer Vision course project).
- Wikipedia Search engine (Information Retrieval course project).
- Pre-processing Algorithms for Tamil OCR (M.Tech. thesis project).
- Blind Navigation System (B.Tech main project).

Teaching Experience/Professional Activities

- Conducted lab session at summer school on deep learning for computer vision (SSDLCV) held at IIIT Hyderabad in July'16,'17 and '18.
- Served as junior instructor for executive course on "Foundations in AI and ML" held at IIIT, Hyderabad from Aug-Sept 2018.
- Conducted a short course on "Feature Learning and Embedding Techniques" at IIIT Hyderabad from May-June'2017.
- Conducted lab session at DAS'2014 on "Building Scalable Solutions for Document Retrieval and Recognition" held at Tours, France.
- Took a tutorial on using LaTeX for writing research papers at IIIT Hyderbad, Dec'13.
- Served as program committee member for ACCV'18, ICVGIP-'14,'16 and '18.
- Served as center cluster admin from 2013-2015.

Selected Talks/Poster Presentations

- Information Retrieval from Handwritten Document Images, R & D showcase 2019, IIIT Hyderabad
- Learning Representation for Word Images at TCS Innovation Lab (Aug'17, Pune).
- Information Retrieval from Large Document Image Collection at TACTiCS 2014 Data Analytics Symposium (New Delhi).
- Machine Learning in Excel at IETE South Zonal Seminar on Networking paradigms and Cyber security (Coimbatore).
- Workshop on Fractals for High School students at NIT Calicut (Dec'10, Calicut).

Skills

Programming	Python, Matlab, LaTeX, Java
Libraries	PyTorch, TensorFlow, NumPy, OpenCV, Matplotlib
Web	PHP, HTML
Languages	English, Hindi, Malayalam

References

Prof. C.V. Jawahar
Professor,
Center for Visual Information Technology,
IIIT Hyderabad, India
Email: jawahar@iiit.ac.in

Prof. K.P. Soman
Professor and Head of Department,
Computational Engineering and Networking,
Amrita Vishwa Vidyapeetham, Coimbatore, India
Email: kp_soman@amrita.edu