

Praveen Krishnan

PHD CANDIDATE IN CSE

Center for Visual Information Technology, Kohli Research Block, IIIT Hyderabad, INDIA

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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

PHD CANDIDATE IN CSE (CGPA: 8.22)

Hyderabad

2013-Present

Amrita School of Engineering, Amrita University

M.TECH. IN COMPUTATIONAL ENGINEERING AND NETWORKING (CGPA: 8.6)

Coimbatore

2009 - 2011

Amrita Institute of Science and Technology, Kerala University

B.TECH. IN INFORMATION TECHNOLOGY (CGPA: 7.41)

Kollam

2003 - 2007

D.A.V Public School, CBSE Board

12th (Percentage: 68.6%)

Ghaziabad

2003

D.A.V Public School, CBSE Board

10th (Percentage: 82.2%)

Ghaziabad

2001

Experience

Center for Visual Information Technology, IIIT Hyderabad

RESEARCH ASSISTANT

Hyderabad

Jan'12 - Present

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

Computer Science Department, Amrita School of Engineering

FACULTY ASSOCIATE

Coimbatore

July'11 - Dec'11

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

Tech Mahindra Limited

TECHNICAL ASSOCIATE

Pune

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 (SSDL CV) 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 Hyderabad, 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

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| 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

Dr. M. Sabarimalai Manikandan

Assistant Professor,
Electrical Sciences,
IIT Bhuvaneshwar, India
Email: msm@iitbbs.ac.in