Ayan Das Curriculum Vitae

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BROAD RESEARCH INTERESTS

## Computer Vision & Deep Learning

- Sketch analysis and synthesis; Intersection of Computer Graphics and Vision
- Deep Reinforcement Learning (RL) theory and applications

## **EDUCATION**

## University of Surrey, United Kingdom

2019 - Present

- Ph.D. in Center for Vision, Speech and Signal Processing (CVSSP)
- Funded by iFlyTek Ph.D. Scholarship
- Associated with SketchX Lab, directed by my supervisor Dr. Yi-Zhe Song
- Research Topic: Deep generative models for sketch synthesis

## Institute of Engineering & Management, Kolkata (India)

2013 - 2017

University: Maulana Abul Kalam Azad University of Technology (MAKAUT)

- Department of Electronics & Communication Engineering
- B.Tech Thesis: 'Gender recognition from body images using part-based model'

## Udayrajpur Hariharpur High School (WBCHSE)

2011 - 2013

- Higher Secondary Examination (12<sup>th</sup> Standard)

## Barasat Mahatma Gandhi Memorial High School (WBBSE)

2006 - 2011

- Secondary Examination (10<sup>th</sup> Standard)

# PUBLICATIONS (G.Scholar Profile)

- 1. (Accepted) A. K. Bhunia\*, **A. Das**\*, U. Muhammad\*, Y. Yang, T. Hospedales, T. Xiang, Y. Gryaditskaya, Y. Song, "Pixelor: A Competitive Sketching AI Agent. So you think you can beat me?", SIGGRAPH Asia 2020. (\*Equal Contribution)
- 2. (Conference) **A. Das**, Y. Yang, T. Hospedales, T. Xiang, Y. Song, "BézierSketch: A generative model for scalable vector sketches", European Conference on Computer Vision (ECCV) 2020.
- 3. (Journal) P.P. Roy, A.K. Bhunia, **A.Das**, P.Dhar, U.Pal, "Keyword spotting in doctor's handwriting on medical prescriptions", Expert Systems with Applications.
- 4. (Journal) **A.Das**, S.Das, "Feature Weighting and Selection with a Pareto-optimal Trade-off between Relevancy and Redundancy", Pattern Recognition Letters.
- 5. (Journal) P.P.Roy, A.K.Bhunia, **A.Das**, P.Dey, U.Pal, "HMM-based Indic Handwritten Word Recognition using Zone Segmentation", Pattern Recognition.
- 6. (Conference) P.P.Roy, **A.Das**, D.Majhi, U.Pal, "Retrieval of Scene Image and Video Frames using Date Field Spotting", The 3<sup>rd</sup> IAPR Asian Conference on Pattern Recognition.
- 7. (Conference) **A.Das**, A.Bhunia, P.P.Roy, U.Pal, "Handwritten Word Spotting in Indic Scripts using Foreground and Background Information", The  $3^{rd}$  IAPR Asian Conference on Pattern Recognition.
- 8. (Conference) A.K.Bhunia, **A.Das**, P.P.Roy, U.Pal, "A Comparative Study of Features for Handwritten Bangla Text Recognition", 13<sup>th</sup> International Conference on Document Analysis and Recognition (ICDAR), pp. 636-640.

Research
EXPERIENCES

### Area of Research: Sketch analysis with Deep Learning 2019

Advisor: Dr. Yi-Zhe Song, Ph.D. TO

- Center for Vision, Speech and Signal Processing (CVSSP) NOW

- University of Surrey, United Kingdom

### 2018 Area of Research: Medical Imaging with Deep Learning

Advisor: Dr. Debdoot Sheet, Ph.D.

2019 - Indian Institute of Technology Kharagpur, India

> - Member of "Kharagpur Learning, Imaging and Visualization (KLIV)" research group

### Area of Research: Evolutionary Computations & Machine Learning 2015

Advisor: Dr. Swagatam Das, Ph.D. TO

- Electronics and Communication Sciences Unit 2016

- Indian Statistical Institute, Kolkata, India

#### 2014 Area of Research: Handwritten Text/Document Recognition

Advisor: Prof. Partha Pratim Roy, Ph.D.

2015 - Dept. of Computer Science.

- Indian Institute of Technology, Roorkee, India.

## PROJECTS (GITHUB PROFILE)

- rlx: A Modualr Reinforcement Learning (RL) library for research.
- A personal website (http://dasayan05.github.io/) written in Jekyll
- Weekly/Monthly tutorials (https://dasayan05.github.io/blogs.html) on wide range of intermediate/advanced topics
- Worked in project "MIRIAD" funded by Intel India Pvt. Ltd.
- "Imagenary", a computer-vision based mouse and keyboard interface for PCs

- ACHIEVEMENTS Intel Student Ambassador (Asia Pacific & Japan) for Artificial Intelligence (A.I.)
  - Former member of "Innovation and Entrepreneurship Development Center (IEDC Lab)" funded by "Department of Science & Technology (DST), Govt. of India"
  - Former vice-president of R&D Dept., Entrepreneurship-Cell (E-Cell), IEM Kolkata
  - Secured Rank 3673 in West Bengal Joint Entrance Examination (WBJEE) in 2013
  - Secured Rank 3359 in Graduate Aptitude Test in Engineering (GATE, EC stream) in 2017

## TECHNICAL SKILLS

- Programming Languages: C/C++, MATLAB, Python, Julia
- ML/DL framework: PyTorch (Highly proficient), Tensorflow
- Mathematics: Linear-algebra, Probability, Statistics
- HPC: Cluster management, MPI, OpenMP
- Web: Basics of front-end, back-end, Flask, REST APIs
- Miscellaneous: Linux, LATEX, Version control (Git), CUDA

References

Will be provided upon request.