

CONTACT INFORMATION	Room 03-BB-00, Alan Turing Building, CVSSP University of Surrey, Guildford, England United Kingdom, Postal code: GU2 7XH	website: ayandas.me email: a.das@surrey.ac.uk ayan.das@mtkresearch.com
RESEARCH INTERESTS	Computer Vision & Deep Learning <ul style="list-style-type: none"> • Vector Graphics synthesis; Intersection of Vision & Graphics • Continuous-time models, Dynamical Systems & their applications • Diffusion Models – Theory and Applications 	
WORK	Senior Deep Learning researcher at MediaTek Research March 2023 - Present <ul style="list-style-type: none"> - Member of the Cambridge DL team led by Alberto Bernacchia - Works on theoretical & applied generative models in computer vision Internship at MediaTek Research June 2022 - Feb 2023 <ul style="list-style-type: none"> - Worked on a theoretically novel Diffusion Models formulation Teaching Assistant (TA) at University of Surrey Jan - May 2022 <ul style="list-style-type: none"> - Graduate course on Image Processing & Deep Learning (EEEM063) - Along with instructors Dr Yi-Zhe Song & Dr John Collomosse 	
EDUCATION	University of Surrey, United Kingdom 2019 - Present <ul style="list-style-type: none"> - Ph.D. student at Centre for Vision, Speech and Signal Processing - Fully funded by iFlyTek Ph.D. Scholarship Institute of Engineering & Management, Kolkata, India 2013 - 2017 University: Maulana Abul Kalam Azad University of Technology (MAKAUT) <ul style="list-style-type: none"> - Department of Electronics & Communication Engineering Udayrajpur Hariharpur High School (WBCHSE) 2011 - 2013 <ul style="list-style-type: none"> - Higher Secondary Examination (12th Standard) Barasat Mahatma Gandhi Memorial High School (WBBSE) 2006 - 2011 <ul style="list-style-type: none"> - Secondary Examination (10th Standard) 	
RESEARCH EXPERIENCES	2019 TO NOW Area of Research: Sketch analysis with Deep Learning Advisor: Dr. Yi-Zhe Song , Ph.D. - SketchX Lab , a research group focused on sketch analysis - Co-advisors: Yongxin Yang , Timothy Hospedales (University of Edinburgh) 2018 TO 2019 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 2015 TO 2016 Area of Research: Evolutionary Computations & Machine Learning Advisor: Dr. Swagatam Das , Ph.D. 2016 - Electronics and Communication Sciences Unit - Indian Statistical Institute, Kolkata, India 2014 TO 2015 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 Modular Reinforcement Learning (RL) library for research.
- A personal website (<https://ayandas.me/>) written in Jekyll
- Weekly/Monthly tutorials (<https://ayandas.me/blogs.html>) on wide range of intermediate or advanced topics
- Worked in project “MIRIAD” funded by INTEL INDIA PVT. LTD.

SELECTED
PUBLICATIONS

Please visit my [GOOGLE SCHOLAR](#) profile for full list of publications.

1. “ChiroDiff: Modelling chirographic data with Diffusion Models”, **A. Das**, Y. Yang, T. Hospedales, T. Xiang, Y. Song, International Conference on Learning Representations (ICLR), 2023.
2. “SketchODE: Learning neural sketch representation in continuous time”, **A. Das**, Y. Yang, T. Hospedales, T. Xiang, Y. Song, International Conference on Learning Representations (ICLR), 2022.
3. “Cloud2Curve: Generation and Vectorization of Parametric Sketches”, **A. Das**, Y. Yang, T. Hospedales, T. Xiang, Y. Song, Computer Vision and Pattern Recognition (CVPR) 2021.
4. “Pixelor: A Competitive Sketching AI Agent. So you think you can sketch?”, A. K. Bhunia*, **A. Das***, U. Muhammad*, Y. Yang, T. Hospedales, T. Xiang, Y. Gryaditskaya, Y. Song, SIGGRAPH Asia 2020. (*Equal Contribution)
5. “BézierSketch: A generative model for scalable vector sketches”, **A. Das**, Y. Yang, T. Hospedales, T. Xiang, Y. Song, European Conference on Computer Vision (ECCV) 2020.
6. “Feature Weighting and Selection with a Pareto-optimal Trade-off between Relevancy and Redundancy”, **A. Das**, S. Das, Pattern Recognition Letters (PRL) Elsevier.
7. “HMM-based Indic Handwritten Word Recognition using Zone Segmentation”, P. P. Roy, A. K. Bhunia, **A. Das**, P. Dey, U. Pal, Pattern Recognition (PR) Elsevier.
8. “A Comparative Study of Features for Handwritten Bangla Text Recognition”, A. K. Bhunia, **A. Das**, P. P. Roy, U. Pal, 13th International Conference on Document Analysis and Recognition (ICDAR), 2015.

PROFESSIONAL
& VOLUNTARY
WORK

- Serving as reviewer for top conferences (CVPR, ICCV, ECCV, BMVC, ACM SIGGRAPH, SIGGRAPH Asia) and journals (T-PAMI, Elsevier Neural Networks, TMLR).
- Supervised two MSc student projects (one was nominated for best project prize).
- [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”

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, Distributed Deep Learning
- Web: Basics of front-end, back-end, Flask, REST APIs

REFERENCES

Will be provided upon request.