

Rajat Subhra Chakraborty

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LinkedIn

About Myself

A passionate and dedicated individual with hands-on experience in the field of deep learning. Currently, I am deeply immersed in projects related to object detection, honing my skills to identify and classify objects within aerial images. My previous endeavors in the realm of AI encompassed medical image segmentation. Additionally, I have explored diffusion models for image synthesis and pattern recognition of Indic Languages. I am eager to leverage my expertise and pursue a deep learning internship that challenges me further and allows me to contribute meaningfully to real-world applications.

Education

University of North Carolina, Charlotte, NC

Pursuing PhD

August 2023 - Present

Graduate Research Assistant working on Video activity understanding and object detection.

Wayne State University, Detroit, MI

PhD (transferred to UNCC)

September 2022 - May 2023

Graduate Teaching Assistant for CSC 1100-Problem Solving and Programming, CSC 2110-Computer Science I, CSC 7760-Deep Learning, CSC 5750-Principles of Web Technologies.

GPA : 3.5/4.0

Wayne State University, Detroit, MI

MS in Computer Science (Transferred to PhD program)

September 2021 - August 2022

Relevant Coursework: Intelligent Systems, Database Management Systems, Theory of Languages and Automata, Computer Graphics, Data Mining, Deep Learning.

GPA: 3.7/4.0.

Future Institute of Engineering and Management, Kolkata, India

BTech in Computer Science and Engineering

August 2017 - August 2021

DGPA: 8.88/10.00, Top 10% of class.

Class Representative.

Undergraduate Thesis : Bangla and Devanagari character recognition using CNN approach.

Experience

CharML Lab - University of North Carolina, Charlotte, NC

Graduate Research Assistant

August 2023 - Present

Working on Object Detection in Aerial Images under the supervision of Dr. Srijan Das.

PURE Lab - Wayne State University, Detroit, MI

Student Research Assistant

March 2022 - July 2022

Worked on deep learning for cervical texture analysis and segmentation techniques under Dr. Mohammad Mehrmohammadi.

Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

Research Intern

October 2020 - December 2020

Implemented deep local descriptors for instance-level recognition of historical architectures.

CMTER Lab - Jadavpur University, Kolkata, India

Research Intern

July 2020 - August 2020

Developed transfer learning models for handwritten character recognition. Achieved 99.99% accuracy on Bangla dataset using VGG16 backbone. Developed two stage feature selection method for character recognition.

Indian Statistical Institute, Kolkata, India

Summer Research Intern

May 2020 - July 2020

Detected text in images of Indus Valley Civilization seals and created dataset of seals.

Skills

Languages: C++, Python, C

Frameworks & Libraries: TensorFlow, PyTorch, NumPy, Pandas

Domains: Pattern Recognition, Machine Learning, Deep Learning, Image and Video Processing
Soft Skills: Management, Teamwork, Professional Communication.

Publications

R. Chakraborty et al., "A Two-Stage Deep Feature Selection Method for Online Handwritten Bangla and Devanagari Basic Character Recognition", SN Computer Science, 2022.

R. Chakraborty et al., "Online handwritten Bangla and Devanagari character recognition by using CNN: A deep learning concept", IEEE ICCE, 2020.

R. Chakraborty et al., "Recognition of Online Handwritten Bangla and Devanagari Basic Characters: A Transfer Learning Approach", IAPR CVIP, 2020.

M. Rudra et al., "Design of frequency selective surface comprising of dipoles using artificial neural network", International Journal of Advances in Applied Sciences, 2020.