Shuvozit Ghose

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Summary -

An ML engineer/ data scientist with 4+ years of hands-on experience in machine learning research and development. My expertise encompasses a profound understanding of key machine learning concepts, coupled with a comprehensive grasp of data preprocessing, model training, and effective deployment strategies. My practical work has spanned diverse machine learning techniques, including prompt learning, domain adaptation, meta-learning, generative adversarial networks, self-supervised learning, and few-shot learning etc.

Education -

Master of Science — ML Specialization

DGPA: 4.20/4.50

Sept 2021 - Oct 2023 University of Manitoba, Canada

Bachelor of Technology — Computer Science and Engineering

DGPA: 8.87/10.

Aug 2016 - Aug 2020 West Bengal University of Technology, India

Technical Skills -

 $\textit{Python} \mid \textit{Pytorch} \mid \textit{Git} \mid \textit{Docker} \mid \textit{Kubernetes} \mid \textit{CI/CD} \mid \textit{Azure} \mid \textit{Tensorflow} \mid \textit{OpenCV} \mid \textit{SQL} \mid \textit{Numpy} \mid \textit{Panda} \mid \textit{CI/CD} \mid \textit{Azure} \mid \textit{Tensorflow} \mid \textit{OpenCV} \mid \textit{SQL} \mid \textit{Numpy} \mid \textit{Panda} \mid \textit{CI/CD} \mid \textit{Azure} \mid \textit{CI/CD} \mid \textit{Azure} \mid \textit{CI/CD} \mid \textit{Azure} \mid \textit{CI/CD} \mid \textit{CI$ $Java \mid scikit - learn \mid C + + \mid C$

Professional Experience -

Graduate Teaching Assistant | University of Manitoba

Sept 2021 - Oct 2023 | Canada

- Conducted lab for undergraduate students for course Comp 2140 data structure and algorithm using Java.
- Graded assignments and code in Python for the course COMP 4360 machine learning and provided constructive feedback to students.
- Graded code in Java, C++, and Javascript for the course COMP 2150 object orientation and provided constructive feedback to students.
- Graded projects in Java using Android Studio for the course COMP 3350 Software Engineering and provided constructive feedback to students.
- Graded code in processing for the course COMP 3490 Computer Graphics I and provided constructive feedback to students.

Graduate Research Assistant | University of Manitoba

Sept 2021 – Oct 2023 | Canada

- developed a Pretrained Point Cloud to Image Translation Network for CLIP-based point cloud recognition using Python and Pytorch.
- introduced a novel viewpoint adapter for a prompt-based point cloud recognition system.
- developed a novel few-shot meta-episodic learning framework for CLIP-based point cloud classification.
- Computed inference using PyTorch on both CPU and GPU running CUDA 11.2 (@Acc > 85%).

Research Intern | *University of Surrey*

June 2020 – Mar 2021 | UK

- developed a multi-stage joint visual semantic reasoning decoder for text recognition using Python and Pytorch.
- developed a Writer-Adaptive Handwritten Text Recognition system using meta-learning.

Achievements

- 1. Awarded University of Manitoba Graduate Fellowship (UMGF) at the University of Manitoba 2022-2023.
- 2. Awarded International Graduate Student Entrance Scholarship (IGSES) at the University of Manitoba 2021.
- 3. Got NPTEL Elite Certification in Deep Learning for Visual Computing, 2018.

Publications

Joint Visual Semantic Reasoning: Multi-Stage Decoder for Text Recognition

Oct 2021

Ayan Kumar Bhunia, Aneeshan Sain, Amandeep Kumar, Shuvozit Ghose, Pinaki Nath Chowdhury, Yi-Zhe Song PDF

IEEE Conference on International Conference on Computer Vision (ICCV)

June 2021

MetaHTR: Towards Writer-Adaptive Handwritten Text Recognition

Ayan Kumar Bhunia, Shuvozit Ghose, Amandeep Kumar, Pinaki Nath Chowdhury, Aneeshan Sain, Yi-Zhe Song

IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

PDF

C5	Modeling Extent-of-Texture Information for Ground Terrain Recognition Shuvozit Ghose, Pinaki Nath Chowdhury, Partha Pratim Roy, Umapada Pal IEEE International Conference on Pattern Recognition (ICPR)	PDF	Sept 2020
C4	UDBNET: Unsupervised Document Binarization Network via Adversarial Game Amandeep Kumar*, Shuvozit Ghose*, Pinaki Nath Chowdhury, Partha Pratim Roy, Uma Pal	pada	Sept 2020
C3	IEEE International Conference on Pattern Recognition (ICPR) Fractional Local Neighborhood Intensity Pattern for Image Retrieval using Genetic gorithm Shuvozit Ghose, Abhirup Das, Ayan Kumar Bhunia, Partha Pratim Roy Multimedia Tools and Applications	<u>PDF</u> c Al- <u>PDF</u>	Sept 2020
C2	A Deep One-Shot Network for Query-based Logo Retrieval Avan Kumar Bhunia Ankan Kumar Bhunia Shuyozit Ghose Abhirup Das Partha Pratim	ı Roy, <u>PDF</u>	July 2019
C1	User Constrained Thumbnail Generation Using Adaptive Convolutions Perla Sai Raj Kishore, Ayan Kumar Bhunia, Shuvozit Ghose, Partha Pratim Roy International Conference on Acoustics, Speech, and Signal Processing (ICASSP)	<u>PDF</u>	May 2019