Shuvozit Ghose

+1-431-554-2105 shuvozit.ghose@gmail.com /shuvozitghose.github.io/ Canada
/shuvozitghose/ /ShuvozitGhose

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 *Sept 2021 – Oct 2023*
DGPA: 4.20/4.50 University of Manitoba, Canada

Bachelor of Technology — Computer Science and Engineering *Aug 2016 – Aug 2020*
DGPA: 8.87/10. West Bengal University of Technology, India

Technical Skills

$Python$ | $Pytorch$ | Git | $Azure\ Data\ Factory$ | $Apche\ Pyspark$ | $Azure\ Databricks$ | $Azure\ Synapse\ Analytics$ | $Microsoft\ Power\ BI$ | $Docker$ | $Kubernetes$ | CI/CD | $Tensorflow$ | $OpenCV$ | SQL | $Numpy$ | $Panda$ | $Java$ | $C++$ | 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.

Notable Projects

2021 Tokyo Olympic data analytics in Microsoft Azure

- Extracted raw Tokyo Olympic data from GitHub using Azure Data Factory.
- Transformed raw data using Apache Pysparck in Azure Databricks and stored in Azure Data Lake Gen 2.
- Loaded transformed data in Azure Synapse Analytics and Visualized the results using Microsoft Power BI.

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

C7 **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
IEEE Conference on International Conference on Computer Vision ***(ICCV)*** PDF

C6 **MetaHTR: Towards Writer-Adaptive Handwritten Text Recognition** *June 2021*
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** *Sept 2020*
Shuvozit Ghose, Pinaki Nath Chowdhury, Partha Pratim Roy, Umapada Pal
IEEE International Conference on Pattern Recognition ***(ICPR)*** PDF

C4 **UDBNET: Unsupervised Document Binarization Network via Adversarial Game** *Sept 2020*
Amandeep Kumar*, **Shuvozit Ghose***, Pinaki Nath Chowdhury, Partha Pratim Roy, Umapada Pal
IEEE International Conference on Pattern Recognition ***(ICPR)*** PDF

C3 **Fractional Local Neighborhood Intensity Pattern for Image Retrieval using Genetic Algorithm** *Sept 2020*
Shuvozit Ghose, Abhirup Das, Ayan Kumar Bhunia, Partha Pratim Roy
Multimedia Tools and Applications PDF

C2 **A Deep One-Shot Network for Query-based Logo Retrieval** *July 2019*
Ayan Kumar Bhunia, Ankan Kumar Bhunia, **Shuvozit Ghose**, Abhirup Das, Partha Pratim Roy, Umapada Pal)
Pattern Recognition PDF

C1 **User Constrained Thumbnail Generation Using Adaptive Convolutions** *May 2019*
Perla Sai Raj Kishore, Ayan Kumar Bhunia, **Shuvozit Ghose**, Partha Pratim Roy
International Conference on Acoustics, Speech, and Signal Processing ***(ICASSP)*** PDF