

Curriculum Vitae

PRAMIT DUTTA

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Academic Credentials

Master of Applied Science in Computer Engineering Candidate

Affiliation with CSAI (Collaborative Specialization in Artificial Intelligence)

Current CGPA: 4.00/4.00 (After 2nd Semester)

School of Engineering, University of Guelph

Guelph, Ontario, Canada

September 2024- Present

Bachelor of Science (Engineering)

Department of Electronics and Telecommunication Engineering

CGPA:3.81/4.00

Chittagong University of Engineering & Technology (CUET)

Chittagong, Bangladesh

January, 2018- March, 2023

Research Experience

Graduate Research Assistant

*AI Enabled Medical Imaging Lab, University of Guelph**September 2024- Present***Supervisor:** *Dr. Eranga Ukwatta*

Description: My work mainly focuses on the domain adoption of vision language model. I work in a context-driven approach to explore the potential of these models in clinical workflow to support AI-driven healthcare decisions. I am now working with clinicians to find the clinical relevance of these models. In addition, I am extending this work through collaborations with the veterinary and business schools in University of Guelph into different domains.

- Domain adaptation of vision–language models for AI-driven healthcare decisions
- Collaborating with clinicians to validate clinical relevance.
- Extending work into different domains with collaboration veterinary and business schools

Undergraduate Thesis

*Chittagong University of Engineering & Technology;**December 2021- March 2023**Supervisor: Dr. Md. Azad Hossain; Co-Supervisor: Khaleda Akther Sathi*

Description: I developed a hybrid method for retinal disease classification by combining convolutional and attention-based architectures, focusing on aligning texture and shape-based features in retinal imaging.

- Designed and tested a deep learning framework for multi-class retinal disease detection
- Evaluated performance on fundus image datasets using standard metrics

Publication

Sl. No	Title	URL
01.	Self-Supervised Learning for Retinal Disease Classification: Reducing Annotation Dependency with Transformation-Based Pretext Learning with Limited Labels	[Check Out The Paper]
02.	Conv-ViT: A Convolution and Vision Transformer based Hybrid Feature Extraction Method to Detect Retinal Disease Detection	[Check Out The Paper]
03.	Identifying Counterfeit Products using Blockchain Technology in Supply Chain System	[Check Out The Paper]
04.	COVID-19 Detection using Transfer Learning with Convolutional Neural Network	[Check Out The Paper]
05.	Optimization of Temperature and Relative Humidity in an Automatic Egg Incubator Using Mamdani Fuzzy Inference System	[Check Out The Paper]
06.	Multi-Classification of Brain Tumour Images Using Transfer Learning Based Deep Neural Network	[Check Out The Paper]

Projects

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- VLM in Radiology Evaluation** [Check It Out](#)
 - Evaluation of Vision-Language Models for medical image understanding
 - Conv-ViT framework for Hybrid Feature Extraction** [Check It Out](#)
 - A triple stream feature extractor which fuse the feature
 - SSL with Transformation Prediction based Pretext Learning** [Check It Out](#)
 - A SSL approach which use Transformation prediction as Pretext task.
 - DeepGreen: Weed and Crop Detection and Localization** [Check It Out](#)
 - A YOLOv10 based framework for weed and crop detection and localization

Technical Skills

Programming Language: Python, MATLAB, LaTeX, C

Framework: Pytorch, Hugging Face, Tensorflow

Engineering Software: Simulink, Fuzzy Logic Toolbox

Teaching Experience

Graduate Teaching Assistant

ENGG*3390- Signal Processing

University of Guelph

September 2024- December 2024

Description: As a Graduate Teaching Assistant in Signal Processing (Fall 2024), I was responsible for conducting laboratory sessions to help students grasp the fundamental concepts in signal processing. My role also involved grading assignments and invigilating exams. Additionally, I collaborated with the course instructor and fellow GTAs to design practical lab exercises that aligned with the course objectives.

Certification

1. Machine Learning an online non-credit course authorized by Stanford University and offered through Coursera [\[External Link\]](#)
2. DeepLearning.AI TensorFlow Developer Professional Certificate [\[External Link\]](#)
3. AI For Medicine Specialization Certificate authorized by DeepLearning.AI and offered through Coursera [\[External Link\]](#)
4. Internet of Things provided by Planeter Ltd. [\[External Link\]](#)

References

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