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Nilabjanayan Bera

Data Analytics Student

click here for linkedin
click here for github

M.Sc. Big Data Analytics student with good theoretical knowledge and good programming and problem solving skills, interested in Computer Vision tasks.

Projects

Summer Internship : Machine Learning assisted examination of peripheral blood smear images **August 2021 - Present**

Dr. Utpal Garain (Coordinator, Centre for Artificial Intelligence and Machine Learning, ISI Kolkata)

- To analyse the peripheral blood smear images we did pre-processing step, nucleus segmentation, cell segmentation, feature extraction, feature selection and classification of the WBCs.

Machine Learning course project : Medical Image Segmentation efficiently using U-Net and EDPCNN **March 2021 — June 2021**

Dr. Sujoy Kumar Biswas (Director and Principal scientist, AIMP Labs; Visiting scientist, ECSU, ISI Kolkata)

- Several medical image segmentation problems can't be addressed by the classical U-Net approach when dataset size is significantly less. A new methodology(EDPCNN : U-Net + Dynamic Programming) is therefore introduced to improve the performance of U-Net segmentation with a small number of training data.
- Datasets Used: short axis heart MRI dataset, rat embryo dataset.

Classical Computer Vision : Camera Calibration and Fundamental Matrix Estimation Using RANSAC **20 April 2021 — 2 May 2021**

Br. Tamal (PhD, University at Buffalo, Buffalo, NY, USA)

- From two images of the same object from different camera centres we estimated the fundamental matrix using RANSAC algorithm and then matched the keypoints.
- Concepts used : Camera Calibration, RANSAC.

Statistics : "Build your own vector map" with two way ANOVA model. **July 2021**

Arindam Banerjee, Assistant Professor,RKMVERI,Belur and Arnab Chakraborty, Assistant Professor, ISI,Kolkata

- From several zoomed screenshots of google raster image of our university campus, we made our own general vector image using two way ANOVA model.
- Concepts used : Linear Model, Image Stitching

Graduation Thesis : Simulation Study On Non-Parametric Test Statistics **March 2020 — June 2020**

- I performed a simulation study on the non-parametric tests. I compared the performance of Sign Test, Wilcoxon Signed Rank Test, Wilcoxon Rank Sum Test and Median Test with the parametric approaches to deal with one sample and two sample location problems.

Education

Master of Science, Big Data Analytics, RKMVERI, GPA : 9.33/10.00 **Present**
Bachelor of Science, Statistics, Ramakrishna Mission Resedential College(Autonomous),Narendrapur, GPA : 7.84/10 **2016 — 2020**
Higher Secondary, Science stream, WBCHSE, Ramakrishna Mission Vidyapith,Purulia, percentage : 91.6 **2016**
Secondary, WBBSE, BRKMAHS, percentage : 92.7 **2014**

Analytics Skills

Machine Learning	●●●●○	**Deep Learning**	●●●●◐
Data Engineering	●●●●○	**Statistics**	●●●●◐
Optimization Algorithms	●●●◐○	**Data visualization**	●●●●◐
Computer Vision	●●●●◐	**Natural Language Processing**	●●●○○

Programming Languages & Databases

Python	●●●●◐	**R Studio**	●●●●◐
SQL	●●●●◐	**Neo4J**	●●●◐○
PySpark	●●●◐○	**HTML**	●●○○○
C	●●○○○		

Experiences

- Summer Research Intern at Indian Statistical Institute
- Participated in **Kaggle Data Science Bowl - 2018**; Main objective : Cell Segmentation