

# Raktim Mondol

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## SUMMARY & RESEARCH INTEREST

I am an experienced data scientist and programmer (R & Python), with deep expertise in artificial intelligence (AI), bioinformatics, computer vision (CV), and high-performance computing (HPC). My research background is centered on analyzing large datasets, developing new models, and performing advanced statistical analyses. I am a dedicated and committed individual with a strong team-oriented spirit, a positive attitude, and exceptional interpersonal skills.

## EDUCATION

 *PhD*, Computer Science & Engineering 2021 - 2025  
UNSW, Sydney, Australia

**Research Topic:** *Deep Learning For Breast Cancer Prognosis & Explainability*  
◇ **Thesis Submitted**

 *Masters by Research*, Computer Science & Bioinformatics 2017 - 2019  
RMIT University, Melbourne, Australia

**High Distinction (85%)**

**Research Thesis:** *Deep learning in classifying cancer subtypes, extracting relevant genes and identifying novel mutations*

## WORK EXPERIENCE

 *Casual Academic* July 2021 - Continuing

Dept. of Computer Science & Engineering

[UNSW](#)

Sydney, NSW

### Duties/Responsibilities:

- ◇ Conduct Laboratory and Consultation Classes: Computer Vision, Neural Networks and Deep Learning, Artificial Intelligence

 *Teaching Assistant (Casual)* July 2017 - Oct 2019

Dept. of Electrical and Biomedical Engineering

[RMIT University](#)

Melbourne, VIC

### Duties/Responsibilities:

- ◇ Conducted Laboratory Classes: Electronics (EEET2255), Software Engineering Design (EEET2250), Engineering Computing I (EEET2246), Introduction to Embedded Systems (EEET2256).

 *Lecturer (Full-Time)* September 2013 - December 2016

Dept. of Electrical and Electronic Engineering

[World University of Bangladesh \(WUB\)](#)


Dhaka, Bangladesh

### Duties/Responsibilities:

- ◇ Courses Instructed (Theory): Electrical Circuit I, Electrical Circuit II, Engineering Materials, Electronics I, Electronics II, Digital Logic Design and Digital Electronics
- ◇ Courses Instructed (Laboratory): Microprocessor & Interfacing, Digital Electronics and Digital Signal Processing
- ◇ Supervised Students for Projects and Thesis

## RESEARCH EXPERIENCE

 *Doctoral Researcher (Sydney, NSW, Australia)* March 2021 – Jan 2025  
**Biomedical Image Computing Research Group**  
Developed AI models to assist pathologists in breast cancer identification and treatment recommendation.

 *Master's Researcher (Melbourne, VIC, Australia)* March 2017 – April 2019  
**NeuroSyd Research Laboratory**  
Worked on developing a deep learning model and bio-informatics pipeline to extract bio-marker from high-throughput biological data.

## TECHNICAL SKILLS

**Languages:** Python, R, SQL,  $\text{\LaTeX}$   
**Software:** MATLAB, STATA, SPSS  
**Deep Learning Framework:** Tensorflow, Pytorch  
**Distributed & Cloud Computing:** AWS, GCP, GALAXY  
**Operating Systems:** Windows, Linux  
**IDE:** Spyder, Jupyter Notebook, VS Code, Rstudio


## HONORS & RECOGNITION


2021 Awarded PhD Scholarship (Tuition Fee and Stipend)  
2019 Completed Masters by Research with High Distinction  
2017 RMIT Research Stipend Scholarship  
2017 RMIT Research International Tuition Fee Scholarship  
2013 B.Sc. in Electrical and Electronic Engineering with High Distinction  
2013 Vice Chancellor Award Spring 2013, BRAC University  
2010 Dean Award Fall 2010, Fall 2011, BRAC University


## PARTICIPATED EVENTS


2019 Received Training on NGS RNA Seq. & DNA Seq. Data Analysis organized by ArrayGen  
2018 Presented Poster in Sydney Bioinformatics Research Symposium (SBRs)  
2017 Attended AMSI BioinfoSummer 2017 at Monash University  
2017 Presented Thesis in 3 Minute Thesis (3MT) competition at RMIT University  
2017 Received Training on High Performance Computing (HPC) at Monash University  
2017 Symposium on Big Data in Infectious Diseases at University of Melbourne  
2016 Received Training on Research Methodology at World University  
2013 Presented Undergraduate thesis in a Workshop Organized by IEEE Bangladesh

## JOURNAL PAPERS

 R. K. Mondol, E. K. A. Millar, P. H. Graham, L. Browne, A. Sowmya, and E. Meijering, "[GRAPHITE: Graph-Based Interpretable Tissue Examination for Enhanced Explainability in Breast Cancer Histopathology](#)," (Submitted, Under Review), 2024.

 R. K. Mondol, E. K. A. Millar, and A. Sowmya, and E. Meijering, "[BioFusionNet: Deep Learning-Based Survival Risk Stratification in ER+ Breast Cancer Through Multifeature and Multimodal Data Fusion](#)," in *IEEE Journal of Biomedical and Health Informatics*, 2024.

 R. K. Mondol, E. K. A. Millar, P. H. Graham, L. Browne, A. Sowmya, and E. Meijering, "[hist2RNA: An Efficient Deep Learning Architecture to Predict Gene Expression from Breast Cancer Histopathology Images](#)," in *Cancers*, 2023.

 R. K. Mondol, N. D. Truong, M. Reza, S. Ippolito, E. Ebrahimie, and O. Kavehei, "[AFExNet: An Adversarial Autoencoder for Differentiating Breast Cancer Sub-types and Extracting Biologically Relevant Genes](#)," in *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2021.

## CONFERENCE PROCEEDINGS

■ R. K. Mondol, E. K. A. Millar, A. Sowmya, and E. Meijering, “[MM-Survnet: Deep Learning-Based Survival Risk Stratification in Breast Cancer Through Multimodal Data Fusion](#),” in *2024 IEEE International Symposium on Biomedical Imaging (ISBI)*, Athens, Greece, 2024, pp. 1-5.

■ M.I. Khan, R.K. Mondol, M.A. Zamee, and T.A. Tarique, “[Hardware architecture design of anemia detecting regression model based on FPGA](#),” in *International Conference on Informatics, Electronics Vision (ICIEV)*, May 2014, pp. 1-5.

■ Imran Khan, and Raktim Mondol, “[FPGA based leaf chlorophyll estimating regression model](#),” in *International Conference on Software, Knowledge, Information Management and Applications (SKIMA)*, December 2014, pp. 1-6.

■ Raktim Kumar Mondol, Imran Khan, Md. A.K. Mahbubul Hye, and Asif Hassan, “[Hardware architecture design of face recognition system based on FPGA](#),” in *International Conference on Innovations in Information Embedded and Communication Systems (ICIECS)*, March 2015, pp. 1-5.

■ A. Hassan, R. K. Mondol, and M. R. Hasan, “[Computer network design of a company — A simplistic way](#),” in *2015 International Conference on Advanced Computing and Communication Systems (ICACCS)*, Coimbatore, India, March 2015, pp. 1-4.

## REFERENCES

Upon Request