

SUMMARY

Lecturer and researcher with a PhD in Information Technology (Monash, 2020) and 13+ years' experience delivering lectures, tutorials and labs; designing and moderating assessments; supervising capstones and theses; and contributing to curriculum renewal and academic integrity. Current roles: Assistant Lecturer (EducationFocused) at Monash University; Research Officer at MCRI. Strengths: GenAI curriculum design, studentcentred delivery, assessment integrity, demonstrator systems, and applied AI research.

Core Skills

• GenAI/LLM Integration • RAG • Python • Algorithms & Data Structures • Operating Systems • Intelligent Systems/AI • Data Mining • Assessment & Moderation • Academic Integrity (MOSS/JPlag/Turnitin) • Student Engagement • Curriculum Renewal • Capstone/Thesis Supervision • Demonstrator Systems • Research Methods • Publications • Grants • TNE Delivery • Crosscultural Communication • Git/CI • Moodle/Canvas

WORK EXPERIENCE

Assistant Lecturer / Feb 2025 - Present

Department of Data Science and AI Faculty of Information Technology, Monash University, Australia

Lecturing Labs Tutorials Exam and Assignment Marking Curriculum Development Assessment Design

Research Officer / Sep 2022 - Present

Epidemiological Informatics Murdoch Children's Research Institute

BN modeling Vaccine Safety Signal Detection Collaboration Data Processing Experimentation Statistical Analysis
Algorithm Design Publication

Assistant Professor / Nov 2020 - Sep 2024

Department of Computer Science & Engineering University of Dhaka, Dhaka, Bangladesh

Research Lecturing Assessment Curriculum Syllabus Fund Collaboration Content Preparation

Lecturer / Feb 2013 - Nov 2020

Department of Computer Science & Engineering University of Dhaka, Dhaka, Bangladesh

Lecturing Marking Assessment Research

Research Assistant / Feb 2016 - Dec 2019

Faculty of Information Technology Monash University, Australia

Paper writing Experimentation Exam Marking Lecturing Assessment Curriculum

Lecturer / Jun 2011 - Feb 2013

Department of Computer Science & Engineering Daffodil International University, Dhaka, Bangladesh

Lecturing Marking Assessment Content Preparation

Lecturer / Feb 2011 - May 2011

Department of Computer Science & Engineering City University of Bangladesh, Dhaka, Bangladesh

Lecturing Marking Assessment Content Preparation

Software Engineer / Dec 2010 - Feb 2011

Therap Services LLC US-based Software Company, Dhaka, Bangladesh

Java PHP JSP-Servlets Oracle Spring SQL



Research Outputs & Impact

• **Publications** (count: 36)  [DBLP](#)  [SCHOLAR](#)

Publication Type	Count	Publication Type	Count
Journals	15	Workshop	2
Conferences	17	Tech. Report	1
Theses			2



Selected Teaching Portfolio (UG/PG)

Monash Monash: FIT1008, FIT1045, FIT2004, FIT2100, FIT3080, FIT3139, FIT5047, FIT5142, FIT5211, FIT9133, FIT5145 (roles across lecturing, tutorials/labs, assessment design, QA).

DU & partner universities: Intro to Data Science; ML & Data Mining; Compiler Design; Advanced DBMS; Software Design Pattern; Operating Systems; Theory of Computation; Algorithms; Data Structures; Database Design.



Research Grants

- BDT 1500000/- (AUD 23978.25, the rate of conversion: 62.56 BDT = 1 AUD) ICT Innovation fund from the Department of ICT, Bangladesh Govt. for developing a "DrAi: Artificial Intelligence and Pattern Recognition Driven Assistant for Providing Effective Treatment"
- AUD 10,000/- as Regional Collaborations Programme COVID-19 Digital Grants from Australian Academy of Science for "Geo-spatial transfer learning based rumour-spreading trend analysis to detect fake news about COVID-19 and on the effects of its vaccines."
- BDT 385000/- (AUD 6154.42, the rate of conversion: 62.56 BDT = 1 AUD) University of Dhaka Centennial Research Grant for developing a "Developing Efficient Technique to Detect False Facts Using Knowledge Graph and Bayesian Network Based Models".
- BDT 200000/- (AUD 3196.93, the rate of conversion: 62.56 BDT = 1 AUD) Bangladesh Ministry of Science and Technology Special Research Grant for developing a "Data Driven Intelligent Assistant for Medical Practitioners"



Translational / Industry & Clinical Projects

- VaxSafetyBN (MCRI): multidetector vaccinesafety framework; BN aggregation; MedDRA mapping; rapid cycle analysis contributions.
- Dr. AI (CI/PM): smart prescription generator (grantfunded).
- University systems: Central Admission & Fee Payment (UD); National University Online Admission; AIS; Titas Gas testing.
- Platforms: SOMADHA (freelancing network) and SOBAR DAKTAR (telemedicine) — coordination/PM roles.



ROLES

- **Conference Reviewer** – Pacific Asia Knowledge Discovery in Databases – International Conference on Machine Learning – AAAI – Australian Public Health Conference
- **Journal Reviewer** – IEEE Transactions on Systems, Man and Cybernetics: Systems – Applied Intelligence – International Journal of Data Science and Analytics – Dhaka University Journal of Applied Science and Engineering – IEEE Access
- **Session Chair** CDIC 2025, Adelaide, Australia
- **Admin Tutor** 2018-2019, For units FIT1045, FIT9133, Faculty of IT, Monash University
- **Syllabus and Curriculum** development committee member: FIT1045, FIT9133, Faculty of IT, Monash University
- **Academic Integrity Committee** member: FIT1045, FIT9133, Faculty of IT, Monash University
- **Syllabus Design** committee member: Machine Learning Track, Department of computer Science and Engineering, University of Dhaka

- **Adjunct faculty:** North South University, Independent University of Bangladesh, East West University, Ahsanullah University of Science & Technology, Green Univ. of Bangladesh

Other Experiences

- **Project Coordination Team member:** University of Dhaka AIS (Accounting Information Systems)
- **Project Administration Team member:** National University of Bangladesh Online Admission Management System
- **Consultant and expert team member:** Titas Gas (National Gas Transmission and Distribution Company of Bangladesh) Hardware and Software Testing
- **Project Coordination, development and maintenance Team member:** Central Admission Management System of the University of Dhaka
- **Project Manager and Development Team Leader** for the platform development using React JS for [Somadha - Free-lancing](#) and [Sobar Daktar - Telemedicine](#)
- **Research and Development Team member** Trustworthy AI using Bayesian Network Modelling, Netica, Python and React JS.

EDUCATION

Information Technology - 2020

Doctor of Philosophy, Monash University, Australia

Thesis *iOBN: An Object-Oriented Bayesian Network Modelling Framework with Inheritance.*

[TINYURL \[dot\] COM / SNPVGPA](#)

Computer Scie. & Engi. - 2012

MS, University of Dhaka, Bangladesh

Thesis *An efficient approach to mine correlated graphs.* [TINYURL \[dot\] COM / VRX8KHN](#)

Computer Scie. & Engi. - 2010

BSC (Honours), University of Dhaka, Bangladesh

Thesis Queue management based congestion control in wireless body sensor network

Professional Development & Training (selected)

Murdoch Children's Research Institute (MCRI):

• COVID - 19 Safe Training • RCH Emergency Response curricula • MCRI and VCGS Core Compliance Training • Research Data Management • Performance and Development - Team Member

Monash University:

• Research Strategies and Skills • Advanced Research Methods • Research Integrity • Ethics and Professional Conduct • Understanding Mental Health • Data Protection and Privacy • Introduction to Cyber Security • Equal Opportunity Online Training

University of Dhaka:

• BDITEC (Bangladesh IT-engineers Examination Center) Management • ITEE (Information Technology Engineers Examination) Training of Trainers

Online Learning Platforms:

• Udemy: Complete Data Science Bootcamp • Coursera: Understanding and Visualizing Data with Python • Udemy: Python and Django Full Stack Web Developer Bootcamp • Udemy: React - The Complete Guide • Udemy: Deep Learning A-Z • Udemy: NLP - Natural Language Processing with Python • Google: Introduction to Generative AI

BN Modelling Experience

- Re-engineered Western Grassland Reserve project (Melbourne) as a case-study
- Developed various BNs from the literature for experimentation
- Developing a BN model for Vaccine Safety Signal detection

- BN construction through expert elicitation for vaccine safety signal detection

Technical Skills (selected)

BN Software APIs: Hugin (Java, Python), BN Learn (python), Netica (Java, Python)

Languages: Python, Java, PHP, C++, C, JavaScript, HTML, CSS, Bash, SQL, R

Tools: PyTorch, NumPy, Pandas, dJango, React, Power-BI, Spring-Hibernate, jGraphX, PEP, ANTLR, Latex, LEX-YACC, Weka, Hugin-Expert, Netica, Android Studio, Mendeley, Endnote

Other: Version Control (Git and Git-Hub), Web, Data science and ML, Data Mining.

Development Experience

- Developing the Trustworthy-AI tool for modelling Bayesian network in Medical domain using React framework
- Developing iOBN framework for OO-Bayesian Network Modelling (Java) using Hugin (API), jGraphX (API) and ANTLR (API)
- Full-stack web developer (PHP, JS, JQuery, HTML, CSS, Bootstrap) Online Admission and Fee Payment System, Central Admission Office, University of Dhaka
- Chief Investigator and Project Manager, Smart prescription generator, (Flask:Python) [DRAIBD \[dot\] COM](#)
- Project Coordinator, Freelancer-Client network (Node js and React js), [SOMADHA \[dot\] COM](#)
- Project Coordinator, Tele-medicine App, (Node js and React js), [SOBARDAKTER \[dot\] COM](#)
- Implementing MaxSPRT (A statistical measure for sequential surveillance) for vaccine safety signal detection under SAEFVIC data and settings.
- Automated Mapping of Reactions to MEDRA-Code.
- Developing an automated system for Unit Marking Break-down Summary (UMBS) in Monash University while working as a TA during my PhD.

AWARDS

- Postgraduate Publication Award 2019, FIT, Monash University • Travel grant from ABNMS to attend ABNMS 2018 Conference in Adelaide, Australia • Travel grant to attend ICTAI 2017 in Boston, USA • Australian Postgraduate Award: Monash University • International Postgraduate Research Scholarship (IPRS): Monash University • Merit Scholarship (in B.Sc.) in the University of Dhaka (Held in 2009)

INTERESTS

- **Research:** Machine Learning, Data Mining, Bayesian Artificial Intelligence, Bayesian Statistics, Probabilistic Analysis
- Software development, UI/UX Design

Reference 1

Professor Ann E Nicholson

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PhD Supervisor Postdoc Supervisor

Reference 2

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Supervisor of Units tutored

Reference 3

Carson Kai-Sang Leung

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Research Collaborator Mentor