

Shahadat Uddin

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Research Interest

My research interests encompass AI, machine learning, and deep learning, particularly their applications across various health domains such as health informatics and public health. I have revealed underlying patterns and trends through extensive analysis of large-scale health data, ultimately generating actionable intelligence that can inform health strategies and interventions. I have been recognised as one of the top 2% of Stanford-Elsevier Scientists globally since 2021 (AI and Image processing category). In 2021, my ranking was 179,859th, which improved to 112,054th in 2022 and further improved to 50,323rd in 2023.

Over the years, as a Data and AI expert, I have contributed to various health-related research initiatives. These include being the chief investigator in an NHMRC Ideas grant from 2022 to 2025, working with the South Asia Infant Feeding Research Network from 2014 to 2015, and participating in the Predictive Health Analytics project with the Capital Markets Cooperative Research Centre from 2009 to 2011. I am working on a project in Indonesia to develop Artificial intelligence tools to examine and visualise trends and factors associated with child undernutrition.

Academic Qualifications

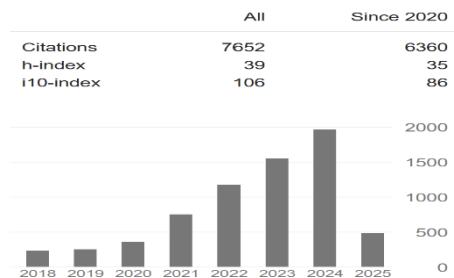
August 2008 – November 2011	PhD (Data Science) Faculty of Engineering, University of Sydney, Australia
March 2005 – November 2006	Master of Information Systems Central Queensland University, Australia
December 1996 – April 2002	Bachelor of Science in Computer Science and Engineering Bangladesh University of Engineering and Technology, Bangladesh

Scholarships and Awards

- One of the Stanford-Elsevier list of the World's top 2% Scientists in the Artificial intelligence and Image processing subfield (Single year: 2021 to Present and Career-long: 2023 to Present)
- Top Researcher Award, Bangladesh University of Engineering & Technology Alumni, Australia, 2020
- Excellence in Innovation Award, CRC Business of Innovation Conference, Australia, 2016
- Dean's Research Award, Faculty of Engineering, University of Sydney, Australia, 2014
- Research Excellence Award, University of Sydney, Australia, 2010
- Capital Markets Cooperative Research Centre PhD Scholarship, 2008 – 2010
- Campus Director's Leadership Award, Central Queensland University, Australia, 2006
- Dean's Commendation for Outstanding Teaching Evaluation (18 times), 2014 – 2023

Publication

- Total articles (163)
 - Journal: 117
 - Conference: 38
 - Book Chapter: 7
 - Report: 1
 - 71% (81) of journal articles published in Q1 journals
- Citation counts: 7,652 (as of 29 March 2025, Source: Google Scholar)
- *h*-index: 39 (as of 29 March 2025, Source: Google Scholar)



Position Held

January 2019 – Present	Senior Lecturer Faculty of Engineering, University of Sydney, Australia
April 2012 – December 2018	Lecturer Faculty of Engineering, University of Sydney, Australia
January 2011 – March 2012	Associate Lecturer Faculty of Engineering, University of Sydney, Australia

Research Activities

Industry Collaboration

- Capital Market Cooperative Research Centre, Australia
- Commonwealth Bank Health Society, Health Insurance, Australia

Keynote speaker

- S. Uddin., “The Use of Patient Data to Explore Healthcare Coordination and Collaboration”, Hospital Costing and Health Coding Forum (27 August 2015), Melbourne, Australia

Invited talk and Panel discussion

- S. Uddin, T. Bryant and J. Linden “*Addressing privacy concerns and ensuring trust in expanded data access and encouraging data partnerships*”, Panel discussion, Chronic disease management summit, 5 April 2022, Sydney, Australia.
- S. Uddin., “*Predictive modelling of the comorbidity of multiple chronic diseases using health insurance claim data*”, Health Insurance Summit (28 October 2020), Sydney, Australia.
- S. Uddin., “*Supervised machine learning algorithms for disease prediction using administrative claim data*”, Health Data Analytics (16 October 2019), Sydney, Australia.
- S. Uddin., “*Network Analytics in Healthcare Decision Making*”, Health Insurance Summit (28 July 2017), Sydney, Australia.
- S. Uddin., “*Prevention through Data Analytics: Early Detection of Chronic Diseases Using Insurance Claim Data*”, Health Insurance Summit (29 July 2016), Sydney, Australia.
- S. Uddin., “*Trends in obesity research over 20 years: what can we learn when complex systems analysts and obesity researchers work together?*” Boden Institute, Charles Perkins Centre, The University of Sydney (12 April 2016), Australia.
- S. Uddin., “*Dynamics of Longitudinal Networks*”, Tokyo Network Workshop (9 November 2014), University of Tokyo, Japan.
- S. Uddin., “*Communities Among Healthcare Professionals and Their Impact on Healthcare Outcomes - A Social Network Analysis Perspective*”, Healthcare Analytics Conference (11 December 2014), Sydney, Australia.

Recognition of Research

- Australian Research Council: Act as a reviewer for Excellence of Research Australia ranking exercise in 2018
- Grant review:
 - BRIDGE Discovery Grant, Swiss National Science Foundation, 2023
 - National Health and Medical Research Council, Australia (2021 – Present)
 - ZonMw (the Netherlands Organisation for Health Research and Development), 2019
 - King Fahd University of Petroleum & Minerals, Saudi Arabia (2014 – Present)
- Peer review summary: 185 verified reviews and 28 editor records
- Journal article review (major ones): Lancet Global Health, Nature Communications, Proceedings of the National Academy of Sciences, Expert Systems with Applications, IEEE Computational Intelligence Magazine, Information Sciences, Knowledge-Based Systems, Computers & Education, Scientific Reports, BMC Bioinformatics and Research Policy Journal.
- Conference technical committee member (TCM), Publicity Chair (PC) and reviewer (R):
 - IEEE Conference on Digital Image Computing: Techniques and Applications (2021) -PC
 - Australasian Computer Science Week (2019 – Present) – R & TCM
 - International Conference on Social Networks Analysis, Management and Security (2019) – R & TCM
 - IEEE Green Energy and Systems Conference (2016-2020) – R
 - Qualitative Health Research (2015 & 2017) - R
 - IEEE Symposium on Business, Engineering and Industrial Applications (2014) - R
- Journal Editorial Board member: Nature Scientific Reports, PLoS ONE, and Complexity
- Associate editor: BMC Health Services Research journal
- Thesis examination: 10×PhD, 3×MPhil, 20×Master, and 12 × Honours

In the Media (major ones only)

- Media release, The University of Sydney (28 March 2022) – later published in 132 newspapers
<https://app.mediaportal.com/#/custom-report/26e1cac1-c037-4655-92bd-12612d5a137f>
- Media release, The University of Sydney (22 March 2022)
[Sydney road networks could influence COVID spread: study shows - The University of Sydney](#)
- Diabetes NSW & ACT (9 November 2020)
<https://diabetesnsw.com.au/news/predicting-heart-disease-in-people-with-type-2/>
- Diabetes Queensland (9 November 2020)
<https://www.diabetesqld.org.au/news/heart-disease-in-people-with-type-2-diabetes/>
- Media release, The University of Sydney (4 November 2020)
<https://www.sydney.edu.au/news-opinion/news/2020/11/04/modelling-could-help-predict-heart-disease-in-people-with-type-2.html>
- The National Tribune (4 November 2020)
<https://www.nationaltribune.com.au/modelling-could-help-predict-heart-disease-in-people-with-type-2-diabetes/>
- Medical Press (4 November 2020)
<https://medicalxpress.com/news/2020-11-heart-disease-people-diabetes.html>
- Indian News Republic (4 November 2020)
<https://indiannewsrepublic.com/researchers-describe-a-model-that-predicts-cvd-in-patients-with-type-2-diabetes/45212/>
- Ethical Editor (4 November 2020)
<https://www.ethicaleditor.com/health/modeling-could-predict-heart-disease-in-people-with-type-2-diabetes/>
- Times Higher Education (7 June 2019)
<https://www.timeshighereducation.com/news/interdisciplinary-research-struggles-bridge-academic-silos>
- Radio interview (SBS radio, 14 March 2016)
<http://www.sbs.com.au/yourlanguage/bangla/en/content/interview-dr-shahadat-uddin>
- Media release, The University of Sydney, Australia 1 (6 February 2016)
<https://sydney.edu.au/news-opinion/news/2016/02/16/how-doctors-communicate-directly-affects-patient-outcomes--new-s.html>
- Media release, The University of Arkansas at Little Rock, USA (27 April 2013)
<https://ualr.edu/informationsscience/2013/04/27/distinguished-publication-by-information-science-faculty/>

Supervision of research students (MPhil and PhD only)

- Haohui Lu (PhD), Primary supervisor: completed in April 2024
- David Lennox Walker (MPhil student), Primary supervisor: completed in July 2021
- Md. Ekramul Hossain (PhD student), Primary supervisor: completed in November 2020
- Nazim Chowdhury (PhD student), Primary supervisor: completed in July 2018
- Arif Khan (PhD student), Primary supervisor: completed in January 2017
- Ye-Ryung Kim-Chung (PhD student), auxiliary supervisor: completed in August 2017
- Shakir Karim (PhD student), Primary supervisor: July 2020 – Present
- Stephen Ong (PhD student), Primary supervisor: March 2021 – Present
- Fangyu Zhou (MPhil student), Primary supervisor: March 2022 – Present

Research Grants

External

- NHMRC Ideas grant (2022-2024), Title: *Safeguarding health in international investment agreements*. With Thow, A., Mitchell, A., Alschner, W., Barlow, P. and Schram, A. Total amount: \$844,369
- Capital Markets Cooperative Research Centre Postdoctoral Researcher (2016-2019); Capital Markets CRC/Fellowship, Total amount: \$360,000 (AUD), Role: Chief Investigator (sole)
- Interim Project Agreement - Predictive Modelling of Chronic Diseases using Big Data Analytics and Complex Network Methods (2014-2016); Capital Markets CRC/Research Agreement, Total amount: \$132,456 (AUD), Role: Chief Investigator (sole)

Internal

- Rewarding Research 2024, Dibley M., Uddin, S., Patay, D., Huda, T., and Billah, SKM., Title: *Developing Artificial Intelligence Tools to Examine and Visualise Trends and Factors Associated with Child Undernutrition in Indonesia*. Faculty of Medicine and Health/FMH Rewarding Research Success
- Educational Innovation Grant (2016) with Sakhaee, E. and Pardo, A., *Integrated Online Modules for a Blended Experience* (Grant ID 16048), University of Sydney, Australia, Total amount: \$8,000
- Early Career Researcher Grant (2015), Faculty of Engineering, The University of Sydney, Australia; Total amount: \$12,208 (AUD), Role: Chief Investigator (sole)