



Riddhiman Adib

Ph.D. Candidate, Graduate Research Assistant

@ riddhiman.adib@marquette.edu +1-414-248-6560 Milwaukee, WI
adib2149.github.io github.com/adib2149

Education

Ph.D. in Computer Science

Marquette University

Aug. 2017 – (Expected) May. 2022 Milwaukee, WI, USA

- **Relevant Courses:** Advanced Machine Learning, Advanced Data Science, Introduction to Intelligent Systems, Social and Ethical Implications of Data
- **GPA:** 3.96
- **Ph.D. Dissertation title:** Causal Inference in Epidemiology: Approaches to Causal Modeling and Reasoning through Graphical Causal Models

M.S. in Computing

Marquette University

Aug. 2017 – May. 2020 Milwaukee, WI, USA

- **Specialization:** Big Data and Data Analysis
- **GPA:** 3.96

B.Sc. in Electrical and Electronics Engineering

Bangladesh University of Engineering and Technology (BUET)

May. 2010 – Sep. 2015 Dhaka, Bangladesh

- **GPA:** 3.32

Experience

Summer Research Intern (Visiting Scholar)

Regenstrief Center for Healthcare Engineering at Purdue University

Summer 2019 West Lafayette, IN

- **Causal Inference:** Exploring underlying causal structure through structure learning algorithms from observational dataset on Delirium patients in ICU, quantifying efficacy of anti-psychotic drugs in its treatment, and related causal explorations.

Graduate Assistant

Ubicomp Lab, Marquette University

Fall 2017 – Present Milwaukee, WI

- **Graduate Research Assistant:** (June 2018 – Present) Research Assistant in multiple mHealth projects, involving 'Self-management Intervention for Parents of Transplanted Children', 'Veteran Mental Health Crisis Management'
- **Graduate Teaching Assistant:** (Aug. 2017 – May 2018) Teaching Assistant for Calculus 1 and Calculus 2
- **Lab Manager:** (Jan. 2019 – Present) User access management and maintenance of code repositories, live servers, and lab research equipment

Software Engineer

Harriken.com Limited

Oct. 2015 – May. 2017 Dhaka, Bangladesh

- **Android Lead:** (Apr. 2016 – May. 2017) Executing existing app expansions and related research & development
- **Software Developer:** (Oct. 2015 – Mar. 2016) Building the mobile solution from scratch on Android Platform and related web services development and deployment on AWS

Objective

Fourth-year Ph.D. candidate with strong communication skills and ability to explore novel research methodologies independently or as part of a team. Actively working in the field of Causal Inference, and seeking a data science/machine learning internship in related domains to help disentangle causal stories from data through hands-on experience.

Projects

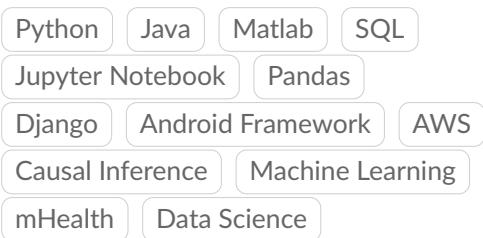
Research Projects:

- **Causal Inference:** Application of causal inference framework in finding effects of anti-psychotic drug intervention on delirium patients in the ICU and related causal explorations
- **Electronic Palliative Care:** Electronic Palliative care solution for critically ill people in developing countries
- **Veteran Crisis Management:** Crisis management in PTSD-affected veterans via peer mentor relationship using mHealth tools

Applications

- **BottomNavBar:** Open-source Android library to add bottom navigation bar to application (*202 GitHub stars*)
- **FormMaster:** Open-source Android library to easily build and use larger forms (*150 GitHub stars*)
- **Harriken:** Restaurant discovery android app, widely-used and based in Dhaka, Bangladesh

Skills



Selected Publications

- Adib, R., Griffin, P., Ahamed, S. I., & Adibuzzaman, M. (2020, September). A Causally Formulated Hazard Ratio Estimation through Backdoor Adjustment on Structural Causal Model. In Machine Learning for Healthcare Conference (pp. 376-396). PMLR.
- Adib, R., Aldawod, E., Lang, N., Lasswell, N., & Guha, S. (2019, July). Analyzing Happiness: Investigation on Happy Moments using a Bag-of-Words Approach and Related Ethical Discussions. In 2019 IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC) (Vol. 1, pp. 653-662). IEEE.
- Roushan, T., Adib, R., Johnson, N., George, O., Hossain, M. F., Franco, Z., ... & Ahamed, S. I. (2019, July). Towards Predicting Risky Behavior among Veterans with PTSD by Analyzing Gesture Patterns. In 2019 IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC) (Vol. 1, pp. 690-695). IEEE.
- Hasan, M. K., Haque, M. M., Adib, R., Tumpa, J. F., Begum, A., Love, R. R., ... & Sheikh, I. A. (2018). Smarthelp: Smartphone-based hemoglobin level prediction using an artificial neural network. In AMIA Annual Symposium Proceedings (Vol. 2018, p. 535). American Medical Informatics Association.
- Lerret, S. M., White-Traut, R., Medoff-Cooper, B., Simpson, P., Adib, R., Ahamed, S. I., & Schiffman, R. (2020). Pilot study protocol of a mHealth self-management intervention for family members of pediatric transplant recipients. Research in Nursing & Health, 43(2), 145-154.

Selected Posters

- "Is Haloperidol effective in Delirium treatment?": Answering Treatment and Policy Controversies in Healthcare through Prior Knowledge-driven Structural Causal Model Generation', presented in 2020 Forward Thinking Poster Session at Marquette University.
- 'Community-based Retinal Screening with Multilingual Software Support to Overcome Language Barriers of Minority Communities', presented in 2020 Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing (CSCW).
- 'mTEH: A Decision Support System for Tele-ophthalmology to Improve Eye Health of Wisconsin Population in Community Settings', presented in 2019 4th IEEE/ACM Conference on Connected Health (CHASE'19), Washington, D.C.
- 'mHealth family self-management intervention for parents of transplanted children: Preliminary results" presented in 2019 14th International Family Nursing Association Annual Meeting, Washington, D.C.
- 'Outcomes of Use of Antipsychotic for Delirium in the ICU: A Big Data Approach', presented in 2019 American Thoracic Society International Conference, Dallas, TX.

Services

- Peer reviewer for **AMIA 2020**
- Peer reviewer for **Trustworthy AI for Healthcare (AAAI 2021 Workshop)**
- Student Volunteer at **NeurIPS 2020**

Co-curricular

 **Film-making**
General Secretary, BUET Film Society
Oct 2014 - May 2015

 **Music**
Performed in multiple music shows,
3rd position in Inter Cadet College
Literary and Music Meet, 2008

 **Basketball**
Part of Champion team in Inter
hall Basketball Competition, BUET,
Runner-up, 2014, Champion, 2015

References

Dr. Sheikh Iqbal Ahamed
Professor and Chair, Dept. of Computer
Science, Marquette University
✉ sheikh.ahamed@marquette.edu

Dr. Mohammad Adibuzzaman
Assistant Director, Data And Computing,
Regenstrief Center for Healthcare Engineering,
Purdue University
✉ madibuzz@purdue.edu