# Riddhiman Adib

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## Objective

Third-year graduate student working towards a Ph.D., with strong communication skills and ability to explore novel research methodologies independently or as part of a team. Working in the field of Causal Inference, related theories, and applied works for more than a year, and now actively seeking a data science internship in similar domains to help disentangle causal stories from data through hands-on experience.

## Education

- **Marquette University** — Milwaukee, WI
  *Ph.D. in Computer Science; GPA: 3.97* — *Aug. 2017 – (Expected)May. 2022*
  Relevant Courses: Introduction to Intelligent Systems, Advanced Algorithms, Advanced Data Science, Parallel and Distributed Systems, Social and Ethical Implications of Data, Elements of Software Development.
- **Bangladesh University of Engineering and Technology** — Dhaka, Bangladesh
  *Bachelor of Science in Electrical and Electronics Engineering; GPA: 3.32* — *May. 2010 – Sep. 2015*

## Experience

- **Regenstrief Center for Healthcare Engineering at Purdue University** — West Lafayette, IN
  *Summer Research Intern (Visiting Scholar)* — *Summer 2018*
  - **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.
- **Ubicomp Lab at Marquette University** — Milwaukee, WI
  *Graduate Assistant (Lab Manager)* — *Fall 2017 - Present*
  - **Graduate Research Assistant**: June 2018 - Present: Research assistant in multiple mHealth projects, involving 'Veteran Mental Health Crisis Management', 'Effective Palliative Care' and others.
  - **Graduate Teaching Assistant**: Aug. 2017 - May 2018: Teaching Assistant for Calculus 1 and Calculus 2.
- **Harriken.com Limited** — Dhaka, Bangladesh
  *Software Engineer* — *Oct. 2015 - May. 2017*
  - **Android Lead**: Apr. 2016 - May. 2017: Planning and executing existing app expansions, bug-fixing through 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.

## 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.

## Skills

- **Programming Languages**: Python *(most proficient)*, Java, Matlab, PHP, SQL, C/C++.
- **Tools & Frameworks**: Jupyter Notebook, Pandas, MySQL, PostgreSQL, Django, Android Framework, AWS, Ubuntu
- **Research Area**: Causal Inference, Machine Learning, Data Science.

## Co-curricular Activities

- **Film-making**: General Secretary, BUET Film Society (Oct 2014 - May 2015).
- **Music**: Lead singer in multiple music shows, 3rd position in Inter Cadet College Literary and Music Meet, 2008.
- **Basketball**: Basketball player, Champion team in Inter hall Basketball Competition, BUET, 2015.

## Publications

- Adib R, Aldawod E, Lang N, Lasswell N, Guha S. '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). IEEE.
- Roushan T, Adib R, Johnson N, George O, Hossain MF, Franco Z, Hooyer K, Ahamed SI. 'Towards Predicting Risky Behavior Among Veterans with PTSD by Analyzing Gesture Patterns'. In 2019 IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC). IEEE.
- Hasan MK, Haque MM, Adib R, Tumpa JF, Begum A, Love RR, Kim YL, Sheikh IA. 'Smarthelp: Smartphone-based hemoglobin level prediction using an artificial neural network'. In 2018 AMIA Annual Symposium Proceedings. American Medical Informatics Association.
- Ahsan GM, Tumpa JF, Adib R, Ahamed SI, Petereit D, Burhansstipanov L, Krebs LU, Dignan M. 'A culturally tailored intervention system for cancer survivors to motivate physical activity'. In 2018 IEEE 42nd Annual Computer Software and Applications Conference (COMPSAC). IEEE.
- Ashikuzzaman M, Ali J, Adib R, Hossain MM, Mahmood SA. 'HgI2 As X-ray Imager: Modulation Transfer Function Approach'. In 2016 IJMRET.

## Selected Posters

- 'Outcomes of Use of Antipsychotic for Delirium in the ICU: A Big Data Approach', presented in 2019 American Thoracic Society International Conference, Dallas, TX.
- '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.
- '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.
- 'E-BAP: A scalable and flexible web-based software system to support self-management for behavior changes', presented in 2019 IEEE International Conference on Biomedical and Health Informatics (BHI'19), Chicago, IL.
- 'MARQUECare: Information Technology Tools and a System for Palliative Care for Everyone', presented in 2019 Healthy People on a Healthy Planet Conference, Milwaukee, WI.
- 'Survey Management and Image Grading Software System for Automated Detection of Diabetic Retinopathy to Improve Eye Health in the Milwaukee Community', presented in 2018 Community Engagement Conference at Medical College of Wisconsin, Milwaukee, WI.