# **Riddhiman Adib**, Ph.D.

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#### 5+ years of applied experience in Machine Learning & Data Science for healthcare and software development & engineering •

- Specializing in Causal Inference, A/B Testing (Experiment design), Electronic Healthcare Data, and Health Informatics. •
- 15+ publications and service as a reviewer in 10+ conferences and journals in the Healthcare and Machine Learning domain. •

### **PROFESSIONAL EXPERIENCE**

### • Research Engineer

Oregon Clinical & Translational Research Institute

Responsibilities: Informatics Scholar (Jun 2022-Oct 2023) and Research Engineer (Nov 2023-present)

- Applied Causal Inference theories with structure learning algorithms (PC, FCI, MMHC) to find underlying structural causal models and calculated causal effects of drug interventions (AI in Medicine 2023) (arxiv)
- Introduced hierarchy of causal knowledge for causal graph identification from data and background knowledge (arxiv)
- Trained & deployed ML models (XGBoost, Logistic Regression, Causal models) for stakeholders' (clinicians) use

#### Summer Intern •

### Regenstrief Center for Healthcare Engineering

Responsibilities: Summer internship as a visiting scholar

 Curated targeted population cohort and relevant covariates from large electronic healthcare dataset using PostgreSQL, resulting in ~1400 Delirium patients from large MIMIC-III EHR on 50k patients (arxiv)

#### **Graduate Researcher** •

### Ubicomp Lab, Marquette University

Responsibilities: Research Assistant (2nd-4th year) and Teaching Assistant (1st, 5th year)

- Machine learning-driven analysis of Twitter text data (happy moments) with natural language processing (COMPSAC 2019)
- Development of a mHealth App (myFAMI) for self-management intervention for family members of pediatric transplant recipients, resulting in a high acceptability of targeted intervention & improved learning by users (JMIR 2022)
- Development of an electronic peer-mentor support app (*iPeer*) for supporting mental health of Veterans (COMPSAC 2019)

### **Software Engineer**

#### Harriken.com Limited

Responsibilities: Android Lead (Apr 2016-May 2017) and Software Developer (Oct 2015-Mar 2016)

• Designed, developed & deployed a restaurant-discovery Android app (Harriken) with web APIs for a startup, resulting in a user-friendly interface, real-time location-based recommendations & 10K+ Google Play Store downloads (Crunchbase)

### **EDUCATION**

•	<b>Ph.D. in Computer Science</b> (Dissertation focus: Causal Inference, Statistics, Math) Marquette University	<b>Aug. 2017–May 2022</b> Milwaukee, WI
•	Masters in Computing (Specialization: Big Data & Data Analysis) Marquette University	<b>Aug. 2017–May 2020</b> Milwaukee, WI
•	Bachelor of Science in Electrical & Electronics Engineering Bangladesh University of Engineering and Technology	<b>May 2010–Sep. 2015</b> Dhaka, Bangladesh

#### **SKILLS AND CERTIFICATES**

- Programming Languages: Python (Most proficient), SQL, R, Java, Matlab, C/C++ •
- Frameworks and Tools: Pandas, Numpy, Scikit-learn, Do-Why, bnlearn, Tensorflow, Keras, PyTorch, Android Framework, • Django, Cosmos in Epic, AWS
- Research Area: Causal Inference, A/B Testing, Machine Learning, Data Science, Bioinformatics, mHealth
- Online Certifications: Causal Diagrams: Draw Your Assumptions Before Your Conclusions, Neural Networks and Deep • Learning, Programming Mobile Applications for Android
- Soft Skills: Critical thinking, Fast-learning capabilities, Collaboration experiences, Strong interpersonal skills, Multi-tasking •

#### **OPEN SOURCE CONTRIBUTIONS**

- BottomNavBar (~200 Github stars): Open-source Android library to add a bottom navigation bar to the app
- FormMaster (~150 Github stars): Open-source Android library to easily build and use larger forms

### LEADERSHIP AND ACCOMPLISHMENTS

- General Secretary, BUET Film Society (Oct 2014 May 2015) •
- Marguette Computer Science Summer Research Fellow (Summer 2021) •

### Jun. 2022-Present

(Remote) Portland, OR

Jun. 2019-Jul. 2019

West Lafayette, IN

## Aug. 2017-May 2022

Milwaukee, WI

Oct. 2015-May 2017

Dhaka, Bangladesh