

Jannatul Ferdause Tumpa (Jannat)

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Education

- **Marquette University** Milwaukee, Wisconsin
Ph.D. in Computer Science (Passed Qualifier and Proposal Defense) Fall 2017-Current
– **Expected Graduation:** May 2022
– **Dissertation Topic:** Designing a community telemedicine framework with an Explainable Retinal Screening Model and Self-management support to improve the eye health of the Diabetic population
- **Marquette University** Milwaukee, Wisconsin
M.S. in Computing—CGPA: 3.89/4.0 May 2020
– Relevant courses: Advanced Machine Learning, Computer Vision, Advanced Data Science, Social and Ethical Implications of Data, Parallel and Distributed System, Introduction to Cyber Security, Elements of Software Development
- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
B.Sc. in Computer Science and Engineering—CGPA:3.33/4.0 Feb 2011-March 2016
– Relevant courses: Programming Languages (Python, C, C++, Java), Data Structure, Algorithms, Algorithmic Engineering, Database, Computer Architecture, Compiler, Operating System, Computer Networks, Artificial Intelligence, Graphics, Computational Geometry

Experience

- **Investment Data Analytics Intern** Public Investment, Northwestern Mutual
Supervisor: Jason Schultz Summer 2019
– Analyzing Barclay's Research data to develop factor model for finding investment risk and opportunities using Bloomberg BQNT platform
- **Graduate Research Assistant** Ubicomp Lab, Marquette University
Advisor: Dr. Sheikh Iqbal Ahamed Aug'18-Current
– Working on developing an Interpretable Retinal Screening model with CNN architectures utilizing the techniques to achieve Interpretability in ML
– Designed and developed a collaborative tele-medicine framework collaborating with Medical College of Wisconsin and Milwaukee Health Dept. currently used for retinal screening in community-settings.
– Designed and developed a Self-Management Support Tool based on Motivational Interviewing principles in collaboration with Department of Physical therapy at Marquette University
- **Graduate Teaching Assistant** Marquette University
Dept. of Computer Science
– **Instructor of Record** for "Object-Oriented Software Design" course using Java as an in Spring'20
– **Lab instructor** for "Intro to Computer Programming" course using Python in Fall'17 and Fall'19
– **Lab instructor** for "Object-Oriented Software Design" course using Java in Spring'18
- **Software Engineer** SureCash, Progoti Systems Limited
Mobile App Development Team March 2016 - May 2017
– Designed and developed Mobile App for financial transaction using Ionic 2 (a cross-platform framework) which was published both in Google Play Store and Apple App Store

Skills and Certificates

Programming Languages: Python (Most proficient), Java, C, C++, JavaScript

Frameworks and Tools: Django, iOS (Swift), Ionic 2 (Cross-platform), Angular 2, Pandas, Tensorflow, Keras

Research Area: Connected Health, Behavioral Science, Machine Learning, Interpretable AI, Medical Imaging

Online Certifications: Neural Networks and Deep Learning, Improving Deep Neural Networks

Personal Skills: Strong Interpersonal and leadership skill, Collaboration experience, Fast learner, Team player

Honors and Awards

Arthur J. Schmitt Leadership Fellowship for year 2021-2022	2021
Graduate School Deans Research Enhancement Award	2020
SIGCHI Student Travel Grant to attend CSCW	2020
NSF Student Travel Award to attend CHASE Conference	2019
Northwestern Mutual Data Science Institute Scholar	2019
NSF Travel Award to attend CRA-W Grad Cohort for Women	2019
Student Scholarship at Grace Hopper Celebration	2018
Student Scholarship at Grace Hopper Celebration, India	2015
1st position in ITEE Scholarship Contest Organized by KJS Company, Japan	2015
1st position in Android Mobile App Contest by Bangladesh Women in Technology	2015

Selected Publications and Posters

- Tumpa, J., Adib, R., Das, D., Ahamed, S. I., Kim, J., Medic, V., ... Romant, J. (2020, October). Community-based Retinal Screening with Multilingual Software Support to Overcome Language Barriers of Minority Communities. In 23rd ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2020.
- Tumpa, J., Adib, R., Das, D., Ahamed, S. I., Kim, J., Medic, V., ... Romant, J. (2019, September). mTEH: A Decision Support System for Tele-Ophthalmology to Improve Eye Health of Wisconsin Population in Community Settings. In 2019 IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE) (pp. 25-26). 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.
- Ahsan, G. M. T., Tumpa, J. F., Adib, R., Ahamed, S. I., Petereit, D., Burhansstipanov, L., ... & Dignan, M. (2018, July). A culturally tailored intervention system for cancer survivors to motivate physical activity. In 2018 IEEE 42nd Annual Computer Software and Applications Conference (COMPSAC) (Vol. 1, pp. 875-880). IEEE.
- “E-BAP: A scalable and flexible web-based software system to support self-management for behavior changes” at IEEE Biomedical Health and Informatics (BHI) 2019.
- “The Development of Electronic Brief Action Planning (E-BAP): A Self-Management Support Tool for Health Behavior Change” at the 42nd Annual meeting of The Society for Medical Decision Making (SMDM) 2019.
- “Preventing Vision loss of Diabetic Patients: Diabetic Retinopathy Assessment System” at general poster session of Grace Hopper Celebration 2019.
- “Automated Detection of Diabetic Retinopathy And Building Cost-effective Fundus Camera” at Medical College of Wisconsin’s Community Engagement Spring Conference 2018.

Services and Extra-curricular Activities

- Graduate Consultant and co-founder of **ACM-W Student Chapter at Marquette University**, an organization that works towards reducing gender gap in STEM
- Volunteered as Poster Committee Member for **GHC 2020** with AnitaB.org
- Volunteer at **International Conference Machine Learning (ICML)** 2020
- Volunteer at Marquette’s **Girls Who Code (GWC)** club
- Received Awards in Undergraduate level and Inter-University **Math Olympiad**
- Participated in Debate, Elocution, Spelling Bee, Anchoring etc. in High School.