MASHRUR RASHIK

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EDUCATION

University of Massachusetts Amherst *September, 2021 - Present*
Ms/PhD in Computer Science
College of Information and Computer Sciences
Advisor: Dr. Narges Mahyar, Dr. Ali Sarvghad
Current CGPA: 3.95/4.0

University of Dhaka *January, 2016 - December, 2019*
BSc in Computer Science and Engineering
Department of Computer Science and Engineering
Thesis: Exploring Ways to Scale-up Exact Inference Based DCOP Algorithms in Multi-Agent Systems
Advisor: Dr. Md. Mamun-or-Rashid, Dr. Md. Mosaddek Khan
CGPA: 3.92/4.0

WORK EXPERIENCE

University of Massachusetts Amherst *September, 2021 - Present*
Graduate Research Assistant
. Designed and developed a journaling agent for patients with chronic illness
. Developed a categorization to map the existing design space of chatbot avatars
. Designed and developed a multi-agent chatbot for rich input elicitation

University of Massachusetts Amherst *September, 2021 - Present*
Graduate Teaching Assistant
. CICS 210: Data Structures (Fall 2023)
. COMPSCI 325: Introduction to HCI (Fall 2021, Fall 2022)

TigerIT Bangladesh Ltd *June, 2020 - July, 2021*
Software Engineer - Machine Learning
. Developed question-answering systems using a reader-retrieval model
. Implemented a kids learning chatbots in Rasa
. Finetuned a multilingual model (M2M100) on the English-Bengali dataset
. Worked on a Flask server to deploy ML models

RESEARCH AND PUBLICATIONS

* indicates equal contribution

[2023] **Mashrur Rashik**, Mahmood Jasim, Kostiantyn Kucher, Ali Sarvghad, Narges Mahyar. "Beyond Text and Speech in Conversational Agents: Mapping the Design Space of Avatars", Under Review at ACM Conference on Human Factors in Computing (CHI), 27 pages, 2024.

[2023] Zhiqiu Jiang*, **Mashrur Rashik***, Kunjal Panchal, Mahmood Jasim, Ali Sarvghad, Pari Riahi, Erica DeWitt, Fey Thurber, Narges Mahyar. "CommunityBots: Creating and Evaluating A Multi-Agent Chatbot Platform for Public Input Elicitation". ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW), To Appear, 2023.

[2020] **Mashrur Rashik**, Md. Musfiqur Rahman, Md. Mamun-or-Rashid, Md. Mosaddek Khan, Long Tran-Thanh, Nicholas R. Jennings. "Speeding Up Distributed Pseudo-tree Optimization Procedure with Cross Edge Consistency to Solve DCOPs". Applied Intelligence, Springer Nature, October 10, 2020. [Publication]

SERVICE EXPERIENCE

2023 IEEE VIS **Web Chair**

HONORS AND AWARDS

2023 Awarded **Dr. Dave Lomet Graduate Scholarship** for Systems Research
2022 Awarded **Jim Gray Scholarship** for Systems Research
2019 **Champion**, Code Samurai Inter-University Hackathon
2019 Awarded **Bangabandhu Innovation Grant** - 1 million BDT (11,000 USD)
2019 **Winners**, Student to Startup, Chapter 2
2018 **1st Runner Up**, DUITS IT Festival
2017 **21st Position**, ACM-ICPC Asia Dhaka Regional Contest
2017 **5th Position**, City University Inter University Programming Contest

SOFTWARE PROJECTS

Xupri.com, An E-commerce Search Engine

· **Description:** An e-commerce website that consists of products from different fashion brands. A user can compare the products to make the best choice among similar products through comparison. There is also a full functioning delivery system included.

CS_Simulate, A Web Based Algorithm Simulator

· **Description:** A web-based algorithm simulator. It includes simulation of Machine Learning algorithms (K Means Clustering, Linear Regression, Logistic Regression), Linear Algebra algorithms (Eigen Value Decomposition, Gaussian Elimination, Gauss Jordan Elimination), and Database Management algorithms (Static Hashing, Dynamic Hashing) and various Iterative Dynamic Programming algorithms.

Athletio, An Android Based Fitness Application

· **Description:** A fitness application for android devices. It has different types of workout tracking. Some of the features include are Google Maps, Chatbot (AIML) to provide medical tips, Social Media section to post pictures and or update workout status, a messenger section under Social Media, and VR which provides users different environments during workouts.

CS_Classroom, A Web Based Classroom Management Application

· **Description:** A fully functional classroom management application. Includes features such as creating a class with a unique class code provided for each, enrolling students, a forum where students can post articles and such, and an online IDE for writing and executing codes.

Search Engine, Desktop Application

· **Description:** Java-based desktop search application that can search in both text and image format. Usage of text matching for any queries and image name matching in case of image search. Users are also able to search over popular search engines like google, yahoo, duckduckgo and etc.

TECHNICAL STRENGTHS

Machine Learning Libraries	Scikit Learn, PyTorch, TensorFlow, Transformers, Haystack
Programming Languages	C/C++, JAVA, Python
Mobile Application Development	Android
Database	MySQL, Oracle SQL, MongoDB, Firestore
Cloud Platform	Google Firebase, AWS
Web Server Programming	JavaScript, Flask, FastApi
Development	Software Design Pattern, Git

RELEVANT GRADUATE COURSES

Advanced Methods in HCI, Advanced Natural Language Processing, Advanced Algorithms, Advanced Information Assurance, Neural Networks: A Modern Introduction