Md Mehedi Hasan

(313) 455-4390 \diamond mehedi2003@gmail.com

1235 Wildwood Ave, Apt 394, Sunnyvale, CA 94089

Overview

Over 5 years of research experience in the field of health informatics, machine learning and natural language processing, including 6+ years of software development experience in IT Industry.

Educations

Technical Skills	
B.Sc. in Computer Science and EngineeringBangladesh University of Engineering and Technology (BUET), Dhaka	Mar 2009
 Wayne State University, Detroit, Michigan Thesis: Methods for Classification of Consumer Review into The Ones Written Before or Af Purchase 	ter The Product
• Dissertation: Machine Learning Methods for the Analysis of Clinical Conversation M.S. in Computer Science	May 2019
Ph.D. in Computer ScienceWayne State University, Detroit, Michigan	Aug 2019

Research Software and Tools

• Keras, TensorFlow, Scikit-learn, Panda, NLTK, Weka, Matplotlib, LaTeX

Programming Language

• Java, Python, C, C++, C#, JavaScript, HTML, CSS

Database and Storage

• Microsoft SQL Server, Oracle, MySQL, NoSQL (e.g. MongoDB), Amazon S3

Other

• Amazon Web Service (AWS), Kafka, MapReduce, REST API, JSON Schema, Spring, .NET, Docker, Jenkins, JIRA, Confluence, Git, SVN

Publications

Journal Papers

- Hasan M, Carcone AI, Naar S, Eggly S, Alexander GL, Hartlieb KEB, Kotov A. Identifying Effective Motivational Interviewing Communication Sequences Using Automated Pattern Analysis. Journal of Healthcare Informatics Research (JHIR) 2019;3(1):86-106. doi: 10.1007/s41666-018-0037-6. Epub 2018 Oct 31. PubMed PMID: 31602420; PubMed Central PMCID: PMC6786498.
- Idalski Carcone A, Hasan M, Alexander GL, Dong M, Eggly S, Brogan Hartlieb K, Naar S, MacDonell K, Kotov A. Developing Machine Learning Models for Behavioral Coding. Journal of pediatric psychology (JPP) 2019 Apr 1;44(3):289-299. doi: 10.1093/jpepsy/jsy113. PubMed PMID: 30698755; PubMed Central PMCID: PMC6415657.
- Hasan M, Kotov A, Carcone A, Dong M, Naar S, Hartlieb KB. A study of the effectiveness of machine learning methods for classification of clinical interview fragments into a large number of categories. Journal of Biomedical Informatics (JBI) 2016 Aug;62:21-31. doi: 10.1016/j.jbi.2016.05.004. Epub 2016 May 13. PubMed PMID: 27185608; PubMed Central PMCID: PMC4987168.

Conference Papers

- Hasan M, Kotov A, Naar S, Alexander GL, Carcone AI. Deep Neural Architectures for Discourse Segmentation in E-Mail Based Behavioral Interventions. AMIA Joint Summits on Translation Science Proceedings 2019;2019:443-452. eCollection 2019. PubMed PMID: 31258998; PubMed Central PMCID: PMC6568107.
- Hasan M, Kotov A, Carcone AI, Dong M, Naar S. Predicting the Outcome of Patient-Provider Communication Sequences using Recurrent Neural Networks and Probabilistic Models. AMIA Joint Summits on Translation Science Proceedings 2018;2017:64-73. eCollection 2018. PubMed PMID: 29888043; PubMed Central PMCID: PMC5961827.
- Hasan M, Kotov A, Mohan A, Lu S, Stieg PM. Feedback or Research: Separating Pre-purchase from Postpurchase Consumer Reviews. European Conference on Information Retrieval (ECIR) 2016 March; Springer, Cham, (2016): 682-688.
- Kotov A, **Hasan M**, Carcone A, Dong M, Naar-King S, BroganHartlieb K. Interpretable Probabilistic Latent Variable Models for Automatic Annotation of Clinical Text. AMIA Annual Symposium Proceedings 2015;2015:785-94. eCollection 2015. PubMed PMID: 26958214; PubMed Central PMCID: PMC4765604.

Funded Research Projects

- National Institutes of Health (NIH) R21 DK108071 (Role: RA) (2016-2019) Automated Coding of eCoaching Exchanges to Promote Healthier Eating. The goal of the study was to automate qualitative communication coding using machine-learning computer science technology.
- National Heart, Lung, and Blood Institute (NHLBI) 1U01HL097889-01 (Role: RA) (2009-2014) Interventionist procedures for adherence to weight loss recommendations in black adolescents. The goal of my research project was to identify communication behaviors used by weight loss counselors that most strongly predicted black adolescents' motivational statements.
- Ford Motor Company, (Role: RA) (2014-2015) Extraction of actionable insights from online automotive consumer reviews. The goal of this project was to separate various type of online automobile consumer reviews and then extract actionable insights from them.

Scholar Services

Reviewers

- Scientific Reports, Nature (Journal) [1 article]
- Psychotherapy Research (Journal) [2 articles]
- The American Medical Informatics Association (AMIA) Symposium, 2020 [3-5 conference papers]
- The American Medical Informatics Association (AMIA) Summit, 2019 [3-5 conference papers]
- The American Medical Informatics Association (AMIA) Symposium, 2018 [3-5 conference papers]
- The American Medical Informatics Association (AMIA) Summit, 2018 [3-5 conference papers]
- The American Medical Informatics Association (AMIA) Symposium, 2017 [3-5 conference papers]

Professional Member

• The American Medical Informatics Association (AMIA)

Employments

Senior Engineer, Software, Samsung Research America, DHL Lab (Mountain View, CA) Sep 2019 - Present

- Carry out health data and advanced research in digital diagnostics and therapeutics
- Develop and evolve end-to-end HIPAA-compliant, SOC2 compliance health R&D platform

- Utilize mobile, wearable, virtual reality, and advanced sensor technology to capture physiologic responses
- Create mobile applications to support patient self-management and physician decision-making
- Leverage data analytics to supplement clinical care and help patients with their health to facilitate behavioral changes in their daily lives

Instructor/Teaching Assistant (TA), Wayne State University, (Detroit, MI) May 2017 - Aug 2019

- As an Instructor, taught data structure (Summer 2019)
- As a Teaching Assistant, taught data structure lab (Winter 2019)
- As a Teaching Assistant, mentored 15-18 students for a senior project (capstone project) and computer ethics (Fall 2018, Winter 2018)
- As an Instructor, taught Java Programming (Summer 2018)
- As an Instructor, taught object-oriented programming C++ (Summer 2017)
- As a Teaching Assistant, taught object-oriented programming C++ lab (Fall 2017)

Rumble Fellow/Research Assistant (RA), Wayne State University, TEANA Lab (Detroit, MI) Aug 2014 - May 2017

- Automated MI coding to accelerate the pace of communication research in behavioral science
- Developed machine learning models to advance the research in health informatics
- Analyzed large and diverse datasets to discover hidden insights

Software Engineer Summer Intern, Amrock (Detroit, MI) May 2016 - Aug 2016

- Developed an order maintenance tool, which performed 30 times faster than the existing one
- Implemented a commercial tool by addressing variable pricing that provides more flexibility to business users

Software Developer & System Analyst, KB Group (Dhanmondi, Dhaka) Sep 2010 - Jun 2014

- Supervised 4-6 software developers of the TEX team
- Designed and developed a highly scalable, robust, and secure e-ticketing solution
- Improved the efficiency of e-ticketing, which increased the ticket sale 10%-20% compared to the previous year

Programmer, MR Tech Limited (Uttara, Dhaka)

• Redesigned a large-scale, multi-tier retailer system for managing sales report, warehouse, and inventory stock

Jan 2010 - Aug 2010

Software Engineer, Flora Systems (Gulshan, Dhaka) Apr 2009 - Dec 2009

• Implemented an web application for the registration and return submission of income tax and value added tax (VAT)

Honors and Awards

- Recognized as a super intern in I.T.'s RAD monthly magazine, Amrock, Summer Internship 2016.
- Thomas C. Rumble Fellowship, *Wayne State University*, 2014-2015.
- Merit Scholarship for the Higher Secondary School Certificate, Bangladesh Islamic Foundation, 2004.

References

- Website: http://mehedi.org/
- Google Scholar: https://scholar.google.com/citations?user=moFXCPcAAAAJ&hl=en
- Researchgate: https://www.researchgate.net/profile/Mehedi_Hasan33
- $\bullet \ {\bf PubMed:} \ https://www.ncbi.nlm.nih.gov/myncbi/1H1Fbtu2l5kQn/bibliography/public$
- LinkedIn: https://www.linkedin.com/in/mehedihasanwsu