Muntasir Wahed

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Education

University of Dhaka

B.Sc in Computer Science and Engineering (CGPA-**3.66/4.00**) *January 2015 - December 2018*

(**Full curriculum**: http://www.cse.du.ac.bd/curriculum-of-undergraduate-program-old/

Research Experience

Research Assistant, Data & Design Lab *April 1, 2019 - Present*

- **Supervisors**: Dr. Moinul Islam Zaber and Dr. Amin Ahsan Ali
- Worked on the Unique ID generation project with BRAC, the largest NGO in Bangladesh. The UID generation will enable BRAC to uniquely identify each of its beneficiaries, facilitating the proper use of big data in policy-making.
- Extracted the VIIRS DNB Nighttime Lights Dataset and used it to identify regions in Bangladesh that are prospering faster

Publication

- Muntasir Wahed, M M Abid Naziri, Mohammad Shoyaib, Muhammad Asif Hossain Khan: Bangla Spell Checker: A Distance and Prior Probability Based Approach, Jahangirnagar University-IIT-2017 (JJIT, Vol. 6, pp. 97-108)

Working Paper

- Some are More Equal than Others: Deep Learning and the Unequal Production of Knowledge in Artificial Intelligence
  - Working in collaboration with Nuruddin (Nur) Ahmed, Ph.D. student at Western University, Canada
  - Targeted at PLOS ONE; tentative timeline for submission: February 2020
  - Using Causal Inference methodologies and NLP (topic modeling) on a novel dataset (273000 peer-reviewed articles from 63 top CS conferences) to examine the top knowledge-producing organizations in AI

Undergraduate Thesis Project

- Comparative Study of Question Routing in Question Answering Websites (Supervisor: Dr. Asif Hossain Khan)
  - Built a prediction model to identify potential domain-specific experts capable of answering specific questions
  - Performed trend analysis to identify the decaying trend in the significance of community feedbacks
  - Proposed a novel function that captures the temporal decay and evaluated the function on tf-idf, topic model and tag-based approaches

Industry Experience

Enosis Solutions

Software Engineer *April 1, 2019 - October 7, 2019*

- Developed and maintained features using Spring framework (Java), AngularJS and MySQL database
- Collaborated with a medium-sized team to meet client requirements in an efficient and timely manner
- Leveraged skills in **Issue Tracking** (JIRA), **Unit Testing** (Mockito), **Debugging** (DevTools), and Agile development process

Beetles Cyber Security Ltd.

Backend Web Engineer (Intern) *July 1, 2018 - November 30, 2018*

- Developed and maintained REST APIs using python (Django framework) and MySQL database
- Leveraged skills in **Version Control** (Git), developing **REST API** (Django), and generating **API Documentation** (Swagger)

Skills

Programming	Python, C/C++, Java, Javascript, R
Web	Django, Spring, AngularJS, HTML5, SASS
Libraries	Gensim, NLTK, Scikit-Learn, NumPy, Matplotlib, Pandas, Keras
Miscellaneous	Linux, Git, REST API, LaTeX, Content Writing

Projects

NLP Tools for Bengali Language ○

- Built a POS tagger for Bengali using the Viterbi algorithm
- Built a spell checker for Bengali. Initially the spelling corrections were suggested based on edit distance, phonetic distance, and prior probability. Later version improves on the previous one using n-gram language model.

Bug Severity Classifier ○

- Built a model that classifies the severity of a bug report based on the description
- Used smoothed Naive Bayes classifier and feature selection (Chi-Square and Minimum Redundancy and Maximum Relevance) methods to infer the severity of bug reports in three different datasets.

Data Mining and Machine Learning Lab Projects ○

- Implemented FP-Growth and Trie based Apriori algorithm, prepared a comparative analysis by testing them on 5 datasets
- Implemented B+ tree, hashing, k-means algorithm and decision tree, tested them on different datasets

Comparative Analysis of Academic and Non Academic Players

- Collected seasonal statistics of 500 players from different clubs of 7 different leagues in Europe, analyzed the data and drew a conclusion about the effectiveness of academic players playing in the same club
- Modeled the efficacy of the players over different features, which was then used for inference and hypothesis testing

Delivery Distribution System ○

- Built a model, that assigns deliveries to different delivery persons automatically using clustering algorithms, based on two different metrics - minimizing the delivery time and minimizing the number of delivery persons needed
- Implemented at a hackathon organized by ShopUp, a startup that distributes products from small businesses to customers

Extracurricular Activity

Competitive Programming

- ACM ICPC Dhaka Regionals 2017 - Ranked **5th** out of 148 teams
- SUST Inter University Programming Contest 2017 - Ranked **6th** out of 161 teams
- ACM ICPC Dhaka Regionals 2016 - Ranked **19th** out of 123 teams
- National Collegiate Programming Contest 2016 - Ranked **21st** out of 119 teams
- Worked as problem setter in National High School Programming Contest 2017
- Worked as problem setter in HackerRank

Shoshikkha - *Online Education Platform in Bengali*

- Initiated the project and developed the website in 2015, which generates more than 300 views per day
- Contributed to the website as an author and editor of technical articles and tutorials
- The website achieved national recognition, being featured on several national dailies

Content Writing

- Published writer on Quora (featured in International Business Times)
- Authored tutorials about programming languages, data structures, and algorithms at Shoshikkha

Volunteering Activities

- Worked as a Volunteer for CommunityAction, an award winning student-run organization
    - raised fund to construct a library with more than 500 books for under privileged students
    - organized motivational sessions for under privileged students
- Volunteered as an active listener at 7cups, which connects people to trained listeners who can provide emotional support
    - helped more than 40 people through hundreds of conversations
- Volunteered for various campus based organizations, including ACM Students Chapter of Dhaka University