

MD RUHUL AMIN

moamin@cs.stonybrook.edu • 631.449.4058 • scholar:goo.gl/yQNkna • git:github.com/ruhulsbu

EDUCATION

PHD IN COMPUTER SCIENCE

Stony Brook University, NY, USA

Expected Graduation: May 2019

Advisor: Professor Steven Skiena

- Research Area: Deep Learning, Bioinformatics, Data Science
- PhD Thesis: Homology based Sequence Alignment and Annotation Algorithms

MASTER OF SCIENCE IN COMPUTER SCIENCE

Stony Brook University, NY, USA

Aug 2013 - May 2016

CGPA: 3.87/4.00

BSc (ENGG) IN COMPUTER SCIENCE & ENGG

Shahjalal University of Science and Technology (SUST), Bangladesh

Apr 2002 - May 2007

CGPA: 3.96/4.00

EXPERIENCE

RESEARCH SIENTIST INTERN

Amazon AI Algorithms, NY

Summer' 18 and Fall' 17

Mentor: Dr. Baris Coskun

- Modeling User Behavior using the CloudTrail Traces in the AWS Environment
- CADENCE: Conditional Anomaly Detection for Events using Noise Contrastive Estimation

RESEARCH ABROAD

Shahjalal University of Science and Technology

Jan 2016 - May 2016

Advisor: Prof. M Zafar Iqbal

- Bengali Word Embeddings and it's Application in Solving NLP Problems

RESEARCH INTERN

Laufer Center for Physical and Quantitative Biology, SBU, NY

May 2015 - Aug 2015

Advisor: Prof. Thomas MacCarthy

- SHMPrep: Efficient Alignment and Error Correction Methods to Improve Mutation Calls in Ig Sequences

RESEARCH INTERN

Simons Center for Quantitative Biology, CSHL, NY

May 2014 - Aug 2014

Advisor: Prof. Michael Schatz

- NanoBLASter: Fast Alignment Algorithms for Long and Noisy Oxford Nanopore Reads

ASSISTANT PROFESSOR

Computer Science & Engg, Shahjalal Uni of Science and Tech, Bangladesh

Jul 2009 - Jul 2013

- Received 3 Government grants as co-investigator with Professor M. Zafar Iqbal (Total Grant: \$405,000)
- Coordinated the R&D of Center for Research, Testing and Consultancy of CSE Department

TEAM LEADER (SOFTWARE DEVELOPMENT)

iSearch Team, Structured Data Systems Ltd (AfriGIS BD)

May 2007 - Jun 2009

Manager: Magnus Rademeyer

- Team Leader of Location based Information Retrieval System (live at <http://maps.afrigis.co.za>)

PUBLICATIONS

Publications Related to PhD Thesis:

- **Ruhul Amin**, Pranav Garg, Baris Coskun. "CADENCE: Conditional Anomaly Detection for Events Using Noise-Contrastive Estimation." (Submitted to IEEE Symposium on Security and Privacy, 2018.)
- Jason Jones, **Ruhul Amin**, Jessica Kim, Prof. Steven Skiena. "Stereotypical Gender Associations in Language Have Decreased Over Time." (Submitted to American Sociological Review, 2018.)
- **Ruhul Amin**, Alisa Yurovsky, Steven Skiena. "DeepAnnotator: Genome Annotation with Deep Learning." Accepted in Proceedings of the 9th ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics, 2018.
- **Ruhul Amin**, Alisa Yurovsky, Yuping Chen, Steven Skiena, Bruce Futcher. "Re-annotation of 12,495 prokaryotic 16S rRNA 3' ends and analysis of Shine-Dalgarno and anti-Shine-Dalgarno sequences." Accepted in PloS one, Volume 3, Issue 8, 2018.
- Alisa Yurovsky, **Ruhul Amin**, Yuping Chen, Steven Skiena, Bruce Futcher. "Prokaryotic coding regions have little if any specific depletion of Shine-Dalgarno motifs." Accepted in PloS one, Volume 3, Issue 8, 2018.
- **Ruhul Amin**, Steven Skiena, Michael Schatz. "NanoBLASter: Fast Alignment and Characterization of Oxford Nanopore Single Molecule Sequence Reads." Accepted in 6th International Conference on Computational Advances in Bio and medical Sciences, 2016.

Publications Done in Collaboration with CS Department at SUST, Bangladesh:

- Sunny Chowdhury, KMS Islam, SN Mohammad, **Ruhul Amin**, Choudhury Wahid. “*Analysis on Lightning News and Correlation with Lightning Imaging Sensor (LIS) Data.*” Accepted in Emerging Technologies in Data Mining and Information Security, Springer, 2017.
- Noushad Sojib, Saiful Islam, MH Rupok, Sajid Hasan, **Ruhul Amin**, MZ Iqbal “*Design and Development of the social Humanoid Robot named Ribo.*” Accepted in IEEE R10-HTC 2017.
- SN Mohammad, Sakhawat Hossain, MM Rahman, Mithun Das, **Ruhul Amin**. “*Sachetan: A Crowdsourcing-Based Personal Safety Application.*” Accepted in Emerging Technologies in Data Mining and Information Security, Springer, 2017.
- Adnan Ahmad, **Ruhul Amin**. “*Bengali Word Embeddings and its Application in Solving Document Categorization Problem.*” Accepted in 19th International Conference on Computer and Information Technology, IEEE, 2016.
- A Akter, MM Islam, SI Mondal, Z Mahmud, NA Jewel, S Ferdous, **Ruhul Amin**, MM Rahman. “*Computational identification of miRNA and targets from expressed sequence tags of coffee.*” Accepted in ELSEVIER SJBS - 2014.
- **Ruhul Amin**, B Paul, FA Khan. “*Bi-lingual audio assistance supported screen reading software for the people with visual impairments.*” Accepted in 15th International Conference on Computer and Information Technology, IEEE, 2013.
- ME Rahman, R Islam, S Islam, SI Mondal, **Ruhul Amin**. “*MiRANN: A Reliable Approach for Improved Classification of Precursor MicroRNA using ANN.*” Accepted in Genomics, 2012.
- A Naser, D Aich, **Ruhul Amin**. “*Implementation of Subachan: Bengali text to Speech Synthesis Software.*” Accepted in 4th International Conference on Electrical and Computer Engineering, 2011.

AWARDS

- **BASIS National ICT Award 2018 from Govt of Bangladesh** for “Pipilika: Bengali Text Search Engine”
- **Best Poster Award at CEWIT 2017** for “Word Embeddings for Genome Annotation with Deep Learning.”
- **Best Poster Award at IEEE R10 HTC 2017** for “Ribo, a Social Humanoid Robot”
- **Best Poster Award at CEWIT 2015** for “Long Nanopore Reads Alignment using NanoBLASTer Algorithms.”
- **CS Department Chair Fellowship 2013** from SBU CS department for Excellence in Computer Science
- **Prime Minister’s Award 2012** for “Screen Reading Software Mongol Dip” for the Visually Impaired People.
- **mBillionth South Asia Award 2010** for “SMS based Registration and Paperless Admission System.”
- **UGC Best Student Award 2007** for achieving record CGPA from SUST CSE department.
- **University Scholarship 2003-2006** for achieving best results in every academic year from SUST.
- **Primary School Talent-pool Scholarship 1993** by UNICEF and the Government of Bangladesh.

PROJECTS

- **Pipilika: Bengali Text Search Engine.** Live at <http://pipilika.com>, and serve 3,000 queries/day. Funded by GPIT, Accenture and Access to Information Programme of Primer Minister’s Office in Bangladesh.
- **Ribo: A Social Humanoid Robot.** Ribo can speak, interact with humans, make facial gestures, handshake and dance. (<https://ribo.rocks/>). Funded by Science Fiction Society and Ministry of ICT in Bangladesh.
- **Mongol Dip: Bilingual Screen Reading Software for Visually Impaired People.** Used for ICT training of blind people by Visually Impaired People Society. Funded by Ministry of Science and ICT, Bangladesh.
- **Subachan: Bengali Text to Speech Synthesis Software.** This software provide text to speech services to the user of Mongol Dip. Funded by Ministry of Science and ICT, Bangladesh.
- **Cloud Platform based Digital Admission System.** Received numerous awards for minimizing digital divide. Every educational institute under Ministry of Education use similar system in Bangladesh.

PROGRAMMING COMPETITION

- **ACM ICPC World Finals 2012, Poland:** Participated as co-trainer of team SUST Palindrome
- **SIUPC - 2011, Sylhet, Bangladesh:** Problem setter and member of judging panel for contest
- **ACM ICPC Regional Contest (Dhaka) 2006:** Placed 5th as contestant among 90 teams

REFERENCE

- Prof. Steven Skiena, CS Department, Stony Brook University, NY, USA. email: skiena@cs.sunysb.edu
- Prof. Michael Schatz, Schatz Lab, Cold Spring Harbor Lab, NY, USA. email: mschatz@cshl.edu
- Prof. Thomas MacCarthy, AMS Department, SBU, NY, USA. email: thomas.maccarthy@stonybrook.edu