Anik Saha

213 Hoosick St, Troy, NY 12180
aniksh.github.io • +1.518.428.2758 (cell) • sahaa@rpi.edu

Education

- **Rensselaer Polytechnic Institute** **Troy, NY**
  M.S. Electrical Engineering *Expected Graduation: Aug, 2023*
  - Working on domain adaptation, causal information extraction, multi-sense word embeddings
- **Bangladesh University of Engineering and Technology** **Dhaka, Bangladesh**
  B.Sc. Electrical and Electronic Engineering *May 2010 - Sep. 2015*

Publications

Anik Saha, Jian Ni, Oktie Hassanzadeh, Alex Gittens, Kavitha Srinivas, and Bulent Yener. Spock at fincausal 2022: Causal information extraction using span-based and sequence tagging models. In *Proceedings of the 4th Financial Narrative Processing Workshop@ LREC2022*, pages 108–111, 2022a.

Anik Saha, Alex Gittens, Jian Ni, Oktie Hassanzadeh, Bulent Yener, and Kavitha Srinivas. Spock@ causal news corpus 2022: Cause-effect-signal span detection using span-based and sequence tagging models. In *Proceedings of the 5th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE)*, pages 133–137, 2022b.

Anik Saha, Catherine Finegan-Dollak, and Ashish Verma. Position masking for improved layout-aware document understanding. In *Document Intelligence Workshop at KDD*, 2021.

Internship Experience

- **IBM Research** **Yorktown Heights, NY**
  Summer Research Extern *May 2022 - Aug 2022*
  - Worked on domain adaptation of span-based and sequence-tagging models for causal information extraction from text
  - Experimented with adversarial training approaches for domain adaptation of pre-trained transformer models to unlabeled target domain
- **IBM Research** **Yorktown Heights, NY**
  Summer Research Extern *May 2021 - Aug 2021*
  - Externship on causal knowledge extraction from unlabeled text documents
  - Incorporated dependency and constituency parse information to the transformer network for better performance in causal relation extraction
- **IBM Research** **Yorktown Heights, NY**
  Summer Research Intern *Jun 2020 - Aug 2020*
  - Remote internship in the AI Platforms and Runtimes department
  - Worked on multimodal information extraction from business documents
  - Improved a pre-trained language model using a combination of textual and positional features in scanned document images

Research Experience

- **Rensselaer Polytechnic Institute** **Troy, NY**
  Research Assistant *Jan 2019 - Present*
  - Improved word sense induction performance of multi sense embeddings with knowledge distillation from pre-trained language models
  - Implemented domain adaptation methods for pre-trained transformer models to extract causal information from text
- **Semion Inc.** **Dhaka, Bangladesh**
  Machine Learning Researcher *Sep 2016 - Jul 2017*
  - Developed deep learning models for sentiment analysis of large documents
  - Utilized distributed computing techniques to speed up training

Teaching Experience

- **Rensselaer Polytechnic Institute** **Troy, NY**
  Teaching Assistant *Aug 2017 - Dec 2018*
  - Held office hours, developed assignment solutions and graded assignments for the Introduction to Machine Learning course
- **Daffodil International University** **Dhaka, Bangladesh**
  Lecturer, Department of Electrical and Electronic Engineering *May 2016 - Aug 2016*
  - Taught Introductory Computer Programming, Analog Electronics and Electric Machines

Class Project

- *Neural Abstractive Summarization with Attention Mechanism* Spring 2019
  - Evaluated the pointer-generator architecture on the WikiHow dataset. Modified the Tensorflow implementation of the pointer-generator architecture to add a decoder attention mechanism to prevent repetition in the generated summary.
- *Action recognition with deep learning* Spring 2018
  - Used sequence of frames from videos for recognizing human actions. Built an LSTM network on top of a convolutional feature extractor to predict an action from 11 predefined classes using Tensorflow.

Coursework

Graduate: Deep Learning, Computational Optimization, Machine Learning, Natural Language Processing, Time Series Analysis, Data Analytics, Machine Learning and Optimization

Undergraduate: Computer Programming, Digital Signal Processing, Introduction to Image Processing

Skills

Programming Languages: Python, MATLAB

Deep Learning Framework: Tensorflow, PyTorch

Version Control: Git

Office Tools: LaTeX, MS Word, PowerPoint, Excel

Operating Systems: Linux, Windows