Md Kamruzzaman Sarker

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EDUCATION

PH.D. IN COMPUTER SCIENCE
Est. Dec 2019 | CGPA: 4.0
WRIGHT STATE UNIVERSITY
Dayton, OH

GRAD CERTIFICATE IN BIG AND SMART DATA
CGPA: 4.0
WRIGHT STATE UNIVERSITY

DEEP LEARNING SPECIALIZATION
5 courses about deep learning
COURSERA

B.SC. IN COMPUTER SCIENCE
CGPA: 3.52 | Major CGPA: 3.84
KHULNA UNIVERSITY OF
ENGINEERING AND TECHNOLOGY

LINKS

Github:// **md-k-sarker**
LinkedIn:// **md-kamruzzaman-sarker**
Stack Overflow:// **md-kamruzzaman**
Google Scholar:// **md-kamruzzaman**

SKILLS

DEEP LEARNING
Neural Networks • LSTM • CNN
PROGRAMMING LANGUAGES
Python • C++ • Java • C • C#
SOFTWARE DEVELOPMENT
Algorithm development • Desktop
Software • Mobile App • Web Back
End
FRAMEWORKS/TOOLS/IDE
TensorFlow • scikit-learn • Spark •
Hadoop • Android • MATLAB • .NET
• OWL-API • Apache Jena •
DL-Learner • Lucene • jQuery
SEMANTIC WEB
OWL • SPARQL • RDF • RDFS •
Knowledge Graph • Linked Data

EXPERIENCE

INTEL | ARTIFICIAL INTELLIGENCE INTERN
January 2019 – Present | Hillsboro, Oregon, USA
- Intel(R) Math Kernel Library for Deep Neural Networks (Intel(R) MKL-DNN).

ACCENTURE TECHNOLOGY LABS | SUMMER INTERN
May 2017 – Aug 2017 | Dayton, Ohio, USA
- Explored problems and solutions of explainable Artificial Intelligence.
- Built a **framework** for concept induction which helps to map class decision with understandable description.

DATA SEMANTICS LAB | RESEARCH ASSISTANT
Jan 2016 – Present | Dayton, Ohio, USA
- Trying to make automated decisions more transparent **(Explainable AI)** .
- Working to make fault tolerant knowledge graph complete using inductive reasoning.
- Developed and maintaining visual ontology modeling (**OWLAx**) plugin and rule to OWL axiom converter (**ROWLTab**) plugin.

SAMSUNG ELECTRONICS | SOFTWARE ENGINEER
Sep 2013 – Oct 2015 | Dhaka, Bangladesh
- Worked on Android Connectivity team. Solved more than 50 issues related to Wi-Fi connectivity of 30+ Samsung Android Devices.
- Developed music listener and sync with tizen devices for Samsung Gear.

SELECTED PROJECTS

HCBD: Human Centered Big Data.
- Currently machine learning algorithms are essentially black boxes; I am establishing methods for finding explanations why a particular decision is chosen or not.

Knowledge Graph Completion
- Prediction of relation and entity in knowledge graph.
- Adding new entity to knowledge graph using inductive reasoning.

HICP: Health Insurance Cost Prediction
- Developed tools to predict health insurance cost.
- Tools used deep learning algorithms for training and highly configurable.

OWLAx: Ontology modeler through diagramming.
- Developed tools to create ontology/rdf graph by drag and drop.
- Works as a plugin of Protege.

ROWLTab: Description logic rule to OWL axiom converter.
- Developed tools to create ontology axioms from rule.
- Works as a plugin of Protege.

Samsung Android
- Resolved Wi-Fi related issue for Samsung android devices.
- Worked on driver layer to user interface layer for Wi-Fi connectivity.

PUBLICATIONS

Efficient Concept Induction for Description Logics | Md. Kamruzzaman, Pascal Hitzler.| 33rd AAAI Conference on Artificial Intelligence (AAAI 2019), Honolulu, Hawaii, USA, 2019.

Explaining Trained Neural Networks with Semantic Web Technologies: First Steps | Md. Kamruzzaman Sarker, Ning Xie, Derek Doran, Michael L Reymer, Pascal Hitzler.| Twelveth International Workshop on Neural-Symbolic Learning and Reasoning, NeSy, London, UK, 2017.

Relating Input Concepts to Convolutional Neural Network Decisions | Ning Xie, Md. Kamruzzaman Sarker, Derek Doran, Michael L Reymer, Pascal Hitzler.| NIPS 2017 Workshop: Interpreting, Explaining and Visualizing Deep Learning, NIPS IEVDL 2017.

Rule-based OWL Modeling with ROWLTab Protégé Plugin | Md. Kamruzzaman Sarker, Adila A. Krisnadhi, David Carral, Pascal Hitzler.| 14th Extended Semantic Web Conference (ESWC 2017), Portoroz, Slovenia, 2017.

OWLAx: A Protege Plugin to Support Ontology Axiomatization through Diagramming | Md. Kamruzzaman Sarker, Adila A. Krisnadhi, Pascal Hitzler | International Semantic Web Conference (Posters & Demos), Kobe, Japan, 2016.

Modeling OWL with Rules: The ROWL Protege Plugin | Md. Kamruzzaman Sarker, David Carral, Adila A. Krisnadhi, Pascal Hitzler. | International Semantic Web Conference (Posters & Demos), Kobe, Japan, 2016.

Emotion recognition from speech based on relevant feature and majority voting | Md. Kamruzzaman Sarker, Kazi Md. Rokibul Alam, Md. Arifuzzaman |International Conference on Informatics, Electronics & Vision (ICIEV), Dhaka, Bangladesh, 2014.

AWARDS

- Got Travel Grant to attend 33rd AAAI Conference on Artificial Intelligence (AAAI 2019), Hawaii, USA.

- Got Travel Grant to attend 2nd U.S. Semantic Technologies Symposium (US2TS 2019), North Carolina, USA.

- Got Travel Grant to attend DCVoCamp 2017, Washington DC, USA.

- Nominated for best demo award in 15th International Semantic Web Conference (ISWC 2016), Kobe, Japan.

- Got NSF Travel Grant to attend 15th International Semantic Web Conference (ISWC 2016), Kobe, Japan.

- Got Dean's Award, 2013, KUET.

ACTIVITIES

- Organizer of the On Explainable AI: From Theory to Motivation, Applications and Limitation tutorial, 33rd AAAI Conference on Artificial Intelligence (AAAI 2019), Hawaii, USA.

- Organizer of the On the Role of Data Semantics for Explainable AI tutorial, 2nd U.S. Semantic Technologies Symposium (US2TS 2019), North Carolina, USA.

- Organizer of the Methods and Tools for Modular Ontology Modeling tutorial, 17th International Semantic Web Conference (ISWC 2018), CA, USA.

- Reviewer of ISWC 2017.

- Volunteer of US2TS: The 1st U.S. Semantic Technologies Symposium.

- Presented ontology buildup process at GeoVoCamp 2017, DC, USA.