

KAISER NEWAJ ASIF

PhD in Computer Science, University of Illinois at Chicago

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SUMMARY OF STRENGTHS

- 5+ years of Machine Learning research experience.
- 3+ years of experience in Python building Machine Learning models from scratch.
- 3 months internship experience of working with Deep Learning models.
- 2 years of Software Engineering experience.

KNOWLEDGE & SKILLS

Theory: Machine Learning, Deep Learning, Artificial Intelligence, Game Theory, Convex Optimization, Statistics, Natural Language Processing

Languages: Python, C++, Java, Shell-Script, SQL, Julia

Packages: Scikit-learn, Pandas, Keras, Tensorflow, Armadillo

Tools: Hadoop, Git, Latex, Visual Studio Code

WORK EXPERIENCE

University of Illinois at Chicago

Jan 2014 - May 2019

Research and Teaching Assistant, Department of Computer Science

▷ Employed Game Theory to build a robust classifier.

- Used Zerosum game theory to make loss optimization convex without the need of surrogate losses.
- Our model outperforms classical Machine Learning models like support vector machines (SVM) and Boosting. Prediction performance improved by upto 25%.
- Extend the work to sequence tagging by decomposing the sequence-loss and utilizing Viterbi algorithm.

Sentient Technologies, San Francisco, CA

May 2018 - Aug 2018

Machine Learning Intern

- Developed Deep Learning models (CNN, RNN, LSTM) using Keras, tensorflow for trading predictions.
- Improved prediction by about 4% using Multi-task learning.

Arris, Horsham, PA

May 2013 - Aug 2013

Global Test Team Intern

- Developed DLLs using C# as a part of an existing library to test hardware. Created a wrapper using WaitHandle to enable synchronous communication accessing the asynchronous data-read driver. It saved testing time from manually waiting for different stages by automating the process.
- Developed a process to facilitate easier updates of the test modules in individual test machines.

QI Analysis Inc., Princeton, NJ

Aug 2009 - Aug 2011

Software Engineer

- Improved features of an email based social network analysis software in .Net framework. Enabled efficient display of unread conversations.
- Updated a Joomla (php) based website and built a logger to track installation of the software.

EDUCATION

PhD in Computer Science

Aug 2019

University of Illinois at Chicago, Illinois, United States

Bachelor of Science in Computer Science & Engineering

Mar 2009

Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

REPRESENTATIVE PUBLICATIONS

- **Kaiser Asif**, Wei Xing, Sima Behpour, Brian D. Ziebart, *Adversarial Cost-Sensitive Classification*, International Conference on Uncertainty in Artificial Intelligence (UAI), 2015.

- Jia Li*, **Kaiser Asif***, Hong Wang, Brian D. Ziebart, and Tanya Berger-Wolf, *Adversarial Sequence Tagging*, International Joint Conference on Artificial Intelligence (IJCAI), 2016.
- Rizal Fathony, Anqi Liu, **Kaiser Asif**, and Brian Ziebart, *Adversarial Multiclass Classification: A Risk Minimization Perspective*, Advances in Neural Information Processing Systems (NIPS), 2016.
- Hong Wang, Wei Xing, **Kaiser Asif**, Brian D. Ziebart, *Adversarial Prediction Games for Multivariate Losses*, Advances in Neural Information Processing Systems (NIPS), 2015.
- Rizal Fathony, **Kaiser Asif**, Anqi Liu, Mohammad Ali Bashiri, Wei Xing, Sima Behpour, Xinhua Zhang, Brian D Ziebart, *Consistent Robust Adversarial Prediction for General Multiclass Classification*, arXiv preprint arXiv:1812.07526, 2018.
- **Kaiser Asif**, Lu Zhang, Sybil Derrible, J. Ernesto Indacochea, Didem Ozevin, Brian D. Ziebart, *Machine Learning Model to Predict Welding Quality using Air-Coupled Acoustic Emission and Weld Inputs*, (Submitted to Journal of Mechanical Systems and Signal Processing).

AWARDS AND ACTIVITIES

Awards: UAI Travel Award. National Education Board Scholarship (Bangladesh) for high school graduation. Dean's award in undergraduate. Merit Scholarship for 5th position in undergraduate admission.

Volunteer: UAI student volunteer (2015). Volunteer developer of Sahana (a disaster management software) for Bangladesh Disaster Management Bureau (2008).