

## Kamran Kowsari

---

CONTACT INFORMATION	Olsson Hall, LinkLab <a href="http://www.kowsari.net">www.kowsari.net</a>	202-812-3013 KK7NC@VIRGINIA.EDU
RESEARCH INTERESTS	Machine Learning, Data Mining, Big Data, Mathematical modeling, Bio-medical Computing, Text Mining, Artificial Intelligence, Large Scale Data Processing	
EDUCATION	<b>University of Virginia</b> , Charlottesville, VA <b>Ph.D. Resrarch Area:</b> Machine Learning, Data Mining, Mathematical modeling, Bio-medical Computing, intelligent systems, Deep Learning <b>Advisor:</b> Laura E. Barnes	Summer 2016- present
	<b>The George Washington University</b> , Washington, DC <b>MS. Thesis topic:</b> Investigation of FuzzyFind Searching with Golay Code Transformations <b>Advisor:</b> Simon Y. Berkovich	Fall 2012- 2014
	<b>Azad University</b> , Rodehen, Tehran B.S., Dept. of Computer Science (Machine Learning/Data Mining), <b>BS. Research topic:</b> Control Hardware without Microcontroller <b>Advisor:</b> Omid Aghalatifi	Fall 2008- 2010
	<b>University of Science and Culture</b> , Hamedan, Iran A.S., Dept. of Computer Science (Software), <b>Research topic:</b> Novel of Automation in Accounting System <b>Advisor:</b> Abbas Asgorloo	Fall 2006- 2008
RESEARCH EXPERIENCE	<b>Research Assistant</b> Machine Learning, Big Data, Data Analysis, University of Virginia Supervisor: Laura E. Barnes, Ph.D	Fall 2016 to present
	<b>Research Assistant</b> Big Data, Bio-medical Computing, The George Washington University Supervisors: Simon Berkovich, Ph.D , Anelia Horvath, Ph.D and James K. Hahn Ph.D	August 2012 to May 2016
WORKING EXPERIENCE	<b>IT Lead/DBA</b> SQL Server 2005 and 2008 cost estimated Step Company	April 2011 to July 2012
	<b>Project Manager/Senior Software Developer</b> Big Data, C# .Net, C++, SQL Server, and Rational Rose, DayComputer	January 2008 - February 2011
	<b>Software Developer/ Software Engineer</b> C# .Net, C++, SQL Server, Rational Rose, Data Analysis Pars System Company	January 2007 - February 2008
ORGANIZATION	<ul style="list-style-type: none"><li>• Member of The world's largest professional association for the advancement of technology, Institute of Electrical and Electronics Engineers (IEEE)</li><li>• Member of Association for Computing Machinery (ACM)</li><li>• Member of The Science and Information organisation (SAI)</li><li>• Researcher Member of McCormick Genomic and Proteomic Center Group (MGPC)</li></ul>	

REFEREED  
JOURNAL  
PUBLICATIONS

1. Mojtaba Heidarysafa, Kamran Kowsari, Donald E. Brown, Kiana Jafari Meimandi, Matthew S. Gerber, and Laura E. Barnes. An Improvement of Data Classification using Random Multimodel Deep Learning (RMDL) (International Journal of Machine Learning and Computing (IJMLC) 2018)
2. Kamran Kowsari and Manal H. Alassaf, "Weighted Unsupervised Learning for 3D Object Detection" International Journal of Advanced Computer Science and Applications(IJACSA), 7(1), 2016.
3. Kamran Kowsari, Maryam Yammahi, Nima Bari, Roman Vichr, Faisal Alsaby and Simon Y. Berkovich, "Construction of FuzzyFind Dictionary using Golay Coding Transformation for Searching Applications" International Journal of Advanced Computer Science and Applications (IJACSA)6(3), 2015.
4. Movassagh, Mercedeh, Nawaf Alomran, Prakriti Mudvari, Merve Dede, Cem Dede, Kamran Kowsari, Paula Restrepo et al. "RNA2DAlign: nucleotide resolution allele asymmetries through quantitative assessment of RNA and DNA paired sequencing data." Nucleic Acids Research 44, no. 22 (2016).
5. Mudvari, Prakriti, Mercedeh Movassagh, Kamran Kowsari, Ali Seyfi, Maria Kokkinaki, Nathan J. Edwards, Nady Golestaneh, and Anelia Horvath. "SNPlice: variants that modulate Intron retention from RNA-sequencing data." Bioinformatics 31, no. 8 (2015).
6. Mudvari, Prakriti, Kamran Kowsari, Charles Cole, Raja Mazumder, and Anelia Horvath. "Extraction of molecular features through exome to transcriptome alignment." Journal of metabolomics and systems biology 1, no. 1 (2013).

CONFERENCE  
PAPERS

1. Kamran Kowsari, Mojtaba Heidarysafa, Donald E. Brown, Kiana Jafari Meimandi, Matthew S. Gerber, and Laura E. Barnes. RMDL: Random Multi-models Deep Learning for Classification Task (ACM ICISDM 2018)
2. Kowsari, Kamran, Nima Bari, Roman Vichr, and Farhad A. Goodarzi. "FSL-BM: Fuzzy Supervised Learning with Binary Meta-Feature for Classification." IEEE Future of Information and Communication Conference (FICC 2018)
3. Alicia L. Nobles, Jeffrey J. Glenn, Kamran Kowsari, Bethany A. Teachman, Laura E. Barnes. Identification of Imminent Suicide Risk Among Young Adults using Text Messages, Conference on Human Factors in Computing Systems (ACM CHI 2018)
4. M. Boukhechba, J. Gong, K. Kowsari, M. K. Ameko, K. Fua, P. I. Chow, Y. Huang, B. A. Teachman, M. Gerber, and L. E. Barnes. Physiological Changes over the Course of Cognitive Bias Modification for Social Anxiety. The IEEE Conference on Biomedical and Health Informatics (BHI 2018). March 2018,
5. Kowsari, Kamran, Donald E. Brown, Mojtaba Heidarysafa, Kiana Jafari Meimandi, Matthew S. Gerber, and Laura E. Barnes. "HDLTex: Hierarchical Deep Learning for Text Classification." 16th IEEE International Conference On Machine Learning And Applications (ICMLA 2017).
6. Ritambhara Singh, Kamran Kowsari, Jack Lanchantin, Beilun Wang, and Yanjun Qi "GaKCo: a Fast and Scalable Algorithm for Calculating Gapped k-mer string Kernel using Counting" The European Conference on Machine Learning & Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2017)
7. Manal Alassaf , Kamran Kowsari, James K. Hahn "Automatic, Real Time, Unsupervised Spatiotemporal 3D Object Detection Using RGB-D Cameras" International Conference Computer Graphics, Imaging and Visualization (CGIV) 2015

8. Bari, Nima, Roman Vichr, Kamran Kowsari, and Simon Y. Berkovich. "Novel Metaknowledge-Based Processing Technique for Multimedia Big Data Clustering Challenges." In Multimedia Big Data (BigMM), 2015 IEEE International Conference on, pp. 204-207. IEEE, 2015.
9. Bari, Nima, Roman Vichr, Kamran Kowsari, and Simon Berkovich. "23-bit metaknowledge template towards big data knowledge discovery and management." In Data Science and Advanced Analytics (DSAA), 2014 International Conference on, pp. 519-526. IEEE, 2014.
10. Yammahi, Maryam, Kamran Kowsari, Chen Shen, and Simon Berkovich. "An efficient technique for searching very large files with fuzzy criteria using the Pigeonhole Principle." In Computing for Geospatial Research and Application (COM. Geo), 2014 Fifth International Conference on, pp. 82-86. IEEE, 2014.

#### WORKING PAPERS

1. Kowsari, Kamran, Mojtaba Heidarysafa, Donald E. Brown, Laura E. Barnes. An Overview of Text Clustering Algorithm (Under Progress)
2. Kowsari, Kamran, Mojtaba Heidarysafa, Donald E. Brown, Laura E. Barnes. An Overview of Text Classification Algorithm (Under Progress)
3. Mojtaba Heidarysafa, Kowsari, Kamran, Laura E. Barnes, Donald E. Brown,. "Knowledge Discovery for Train Accident Reports: A Deep Learning Approach" (Under Submission in IEEE Intelligent Transportation Systems)
4. Kamran Kowsari, Andrei C. Cosma, and Rahul Simha "Object Representation and Detection using RGBD-T for a better task handling" (Under submission)
5. Kiana Jafari Meimandi, Kamran Kowsari, Mojtaba Heidarysafa, Mawulolo Ameko, Matthew S. Gerber, Laura E. Barnes, Donald E. Brown "Activity Recognition using Conditional RandomField (CRF) for Accelerometer Sensors" (Under submission)

#### AWARDS

- Presidential Fellows in Data Science 2018-19
- Best Paper Award of International Conference on Information System and Data Mining (ICISDM), 2018 ACM
- Best Paper Award of International Conference Computer Graphics, Imaging and Visualization (CGIV), 2015 IEEE
- The Best Student Award of University of Science and Culture in 2007-8
- The Best Presentation Award of National Conference of Computer Application, 2008

#### TEACHING EXPERIENCE

Co-instructor	CSCI 1121 - Introduction to C Programming with Anasse Bari, CSCI 1131 - Algorithms and Data Structures with Anasse Bari The George Washington University	Fall 2012-16
Teaching Assistant	CS 4501: Network Security, CS 3330: Computer Architecture, CS 6316: Machine Learning, CS 4810: Computer Graphics University of Virginia	Fall 2016-17
Teaching Assistant	CSCI6221: Advanced Software Paradigmsms, CSCI1132: Data Structures and Software Design, CSCI1121: Introduction to C Programming The George Washington University	Fall 2012-16
Instructor and Co-instructor (Private Institute)	SQL Server, Data Structure, OS, Data structure by C Programming Technical Institute of Technology/ Faraby (Tehran)	2007-2011

#### SKILLS

Programming

- Python
- C , C++ , C#
- SQL SERVER
- Delphi(7 and XE3)
- R
- Visual Studio.Net
- Embedded System
- OpenGL
- OpenCV
- OpenNI
- Oracle Database

#### Theoretical Skills

- Deep Learning
- Machine Learning
- Database
- Data analysis
- Data Mining
- Unsupervised Learning
- Semi-Supervised Learning
- Supervised Learning
- Mathematical Modeling
- RUP and UML
- NLP
- Computer Graphics
- Hardware Programming
- Optimization