Dr. Ahmet Faruk ÇAKMAK

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EDUCATION

UDACITY Machine Learning Engineer Nanodegree Program, USA. July 2017-Now
Ph.D. Mathematical Engineering, Yildiz Technical University, Turkey, Jan 2014.
M.S. Department of Mathematics, Gebze Technical University, Turkey, Nov 2007.
B.Sc. Department of Mathematics, Uludag University, Turkey, Jun 2004.

AREA OF INTEREST

Machine Learning, Deep Learning, Computer Vision, Reinforcement Learning, Sampling, Spectral Theory, Data Analysis, Big Data, Subspace Clustering, Wavelet and Frame Theory.

TECHNICAL SKILL SET

Programming Languages: Python, C, C++, Matlab, HTML, Php , Java
Computer Tools: Tensorflow, Keras, Theano, Scikit-learn, Caffe, Magento, Linux, Latex.

WORK EXPERIENCE

Faculty Lecturer Professor (Post-Doc), Department of Mathematical Sciences at Middle Tennessee State University, USA, 01 August 2016 – Now
Lecturing assignments in addition to grading and holding office hours and group discussions for calculus, applied statistics, and various mathematics courses. Teaching active learning classes in applied statistics based on real life experimental data. Supervising department exams and grading the papers. Doing research on individual areas.

Adjunct Faculty Professor (Post-Doc), Department of General Studies of Mathematics at South College, USA, 30 June 2017 - 14 September 2017.
Lecturing assignments in addition to grading and holding office hours and group discussions for college mathematics courses. Teaching with computer based learning methods by ALEKS. Supervising department exams and grading the papers. Doing research on individual areas.

Software Data Analyst, Chef's Deal Restaurant Equipment, USA, 01 January 2017-29 June 2017
Operated as a concept-to-completion website project leader for www.chefsdeal.com, including designing, development and successful deployment. Utilized project management abilities to lead external resources/freelancers, while delegating jobs for Newsletter Designs, SEO, Content Writing, Business Plan and Magento Updates. Managed system integration with latest technology trends, and facilitated new product additions, online/digital marketing and promotions.

PhD Researcher (Post-Doc), Department of Computer Sciences at Tennessee State University, USA, 14 October 2015 - 14 September 2016.
Development of mathematical theory for addressing general subspace segmentation. My focus has been on the similarity matrices for clustering a set of data points that are drawn from a union of subspaces. I have concentrated upon a way of finding similarity matrices that can be used in clustering algorithms. As such, my aim was to refocus and understand the first step used in many subspace clustering algorithms. Experimenting result on big data using computer languages such as Python, Matlab etc.

PhD Researcher (Post-Doc), Department of Mathematics at Vanderbilt University, USA, 27 September 2014 - 26 September 2015.
Engage in research that are going to result in publications in scholarly research journals. I focused on the problem of dynamical sampling problem has similarities to other areas of mathematics and engineering such as wavelet theory, inverse problem, spectral theory, sampling, wireless sensor network.

Research & Teaching Assistant, Yildiz Technical University, Turkey, Since Jan 2009- October2016 .
Lecturing assignments in addition to grading and holding office hours and group discussions for calculus, computer programming such as C\C++, Python, Matlab, mathematical analysis and differential equations courses. Supervising department exams and grading the papers. Supervising and consulting undergrads for internship (Trying to find them the best place to work, helping them for their individual software projects). Doing research on individual areas and publishing paper in high ranking scientifically indexed journals.

PROJECTS

- TUBITAK 2219 Postdoctoral Research Project, September 2014 - August 2015

- TSU, Subspace Segmentation: Theory and Algorithms, September 2015 – August 2016.

DISSERTATIONS

∗ **On some new sequence spaces over a new field**, PhD Thesis, 2014, Yildiz Technical University (Advisor: Feyzi Basar).

∗ **Countor-Solid theores for meromorphic functions**, M.Sc. Thesis, 2007, Gebze Institute of Technology (Advisor: Tahir Aliyev) .

GRANTS

- Scientific and Technological Research Council of Turkey in Vanderbilt University, September 2014-August 2015 ($30,000).
- US Army in Tennessee State University under the project of Subspace Segmentation: Theory and Algorithms, October 2015-August 2016 ($40,000).

PUBLICATIONS

1. Çakmak, A.F.; Basar, F. *"Some new results on sequence spaces with respect to non-Newtonian calculus"*, **Journal of Inequalities and Applications**, Oct. 2012 (2012:28).
2. Basar, F.; Cakmak, A.F. *"Domain of triple band matrix B r,s,t) on some Maddox's spaces"*, **Annals of Functional Analysis**, Vol. 3, No 1 (2012), pp.32-48.
3. Çakmak, A.F.; Basar, F. *"Certain spaces of funtions over the field of non-Newtonian complex numbers"*, **Abstract and Applied Analysis**, Volume 2014 (2014), Article ID 236124, 12 pages.
4. Çakmak, A.F.; Basar, F. *"Some sequence spaces and matrix transformations in multiplicative sense"*, **TWMS J. Pure Applied Mathematics**, Vol. 6, No. 1, Mar. 2015, pp. 27-37.
5. Cakmak, A.F.; Basar, F. "On double and line integrals in the non-Newtonian sense", **AIP Conference Proceedings**, Vol. 1611(1), Aug. 2914, 9 pages.
6. U. Kadak, M. Kirisci, A.F. Çakmak *"On the classical paranormed sequence spaces and related duals over the non-Newtonian complex field"*, **Journal of Function Spaces,** Vol. 2015, May. Article ID 416906, 11 pages.
7. Aldroubi, A.; Cabrelli, C.; Çakmak, A. F.; Molter, U.; Petrosyan, A. *"Iterative Actions of Normal Operators"* **Journal of Functional Analysis**, Volume 272, Issue 3, 1 February 2017, Pages 1121-1146.
8. Ali Sekmen, Akram Aldroubi, Ahmet Bugra Koku, and Ahmet Faruk Cakmak, *"Skeleton Decomposition Analysis for Subspace Clustering"* **IEEE International Conference on Big Data, Washington DC, USA, December 5-8, 2016.**
9. Ali Sekmen, Akram Aldroubi, Ahmet Bugra Koku, and Ahmet Faruk Çakmak, "*Similarity matrix framework for data from union of subspaces*" **Applied and Computational Harmonic Analysis**, to appear.