

Department of Computer Science

March 04, 2015

Dear ONR YIP Panel,

As Head of the Computer Science Department at the University of New Mexico, I am writing this letter in support of the ONR YIP proposal submitted by Dr. Abdullah Mueen, Assistant Professor of our department. Abdullah's proposal is entitled "Temporal Pattern Mining for Everyone." Dr. Mueen, is in his second year at UNM, is an untenured junior faculty member (tenure-track), and meets all the criteria for the ONR YIP Award. In this support letter I will summarize the importance of Professor Mueen's research.

The University of New Mexico is one of only two US institutions for higher learning that are both Carnegie Very High Research Activity and Minority Serving universities. The state of New Mexico is also an EPSCoR as well as a Majority Minority state, meaning that the majority of our population is made up of minority groups. Over the past several years UNM CS faculty have been actively involved in REU and STEP programs, and Professor Mueen has already shown a strong commitment to undergraduates in our department.

Dr Mueen's record so far is outstanding both in terms of research productivity, establishing strong research agenda with significant broader impact, and exhibiting strong leadership skills. I elaborate on these points below.

Exceptional publication record: While Dr. Mueen has only been here for one and half year, he has already built an active research group and has started publishing already with his group. Overall, he has published over a dozen peer-reviewed papers, including four new conference papers and two journal papers since joining the CS faculty. Just last summer he has mentored three Ph.D., one Master's, and one undergraduate student within our department. He will soon build a large group and a strong pipeline of students through our program, and grants like this will help him support those students.

Highlights of Prof. Mueen's research include a series of papers on time series data mining. Specifically, his focus is efficient supervised and unsupervised pattern discovery from time series data with a focus on interpretability. His work on searching trillion subsequences under time warping has been selected the best paper in 2012 ACM SIGKDD Conference on Data Mining. He has solo authored a paper on mining patterns of all lengths in ICDM 2013 which was a problem believed to be intractable by many researchers.

Prof. Mueen's research excellence has been recognized with the runner-up award of 2012 ACM SIGKDD Doctoral Dissertation Contest. His work has been invited to renowned journals such Knowledge and Information Systems (KAIS) and Wiley's Data Mining and Knowledge Discovery. He has the most cited paper in 2009 SIAM Data Mining conference until now. He is very active professionally and serves in program committees of several top-tier data mining conferences including KDD, ICDM, CIKM and SDM.

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Leadership and initiatives: Dr. Mueen he is the leader of the datascience efforts of our department, which we anticipate will eventually become a highly-visible center. He has already made significant waves within UNM and in the broader community. For example, he actively participated in organizing the Cyber-Infrastructure day on April 25, 2014. He presented a half-day tutorial on data-driven scientific discovery, which was very well accepted.

Dr. Mueen has already had significant impact on our educational program. In fall'13, he created a course on data mining, which was urgently needed in our curriculum. The course ended with a very successful poster session that received university wide attention. He has taught the largest class in the spring'14 semester and 52 students successfully completed his course. His course evaluations have been excellent in his first year.

Interdisciplinary and impactful research agenda: Prof. Mueen's research in data mining is deeply interdisciplinary. His mission is to leverage large data for the betterment of people. His project on mining language variations has a potential to reach a long-standing goal of robustness in speech-based systems. If successful, the project can impact a billion people with an ease of communication to machines and humans. His group has already started collecting speech data as well as organizing them towards that goal. He has another project on mining online reviews of services to identify spamming service owners. Automatic identification of spammers in review systems will make them more usable to mass people. His proposal on *interactive pattern mining* is the backbone for both of these new initiatives on speech and review processing.

In closing, Prof. Mueen is a rising superstar and he is an excellent candidate for the ONR YIP Award and I hope you will give his nomination serious consideration. It is indicative to mention that as chair of the Department, my main concern is how we will ensure that we retain Dr. Mueen, as I am afraid of unsolicited offers from prestigious universities that will start coming in.

Sincerely,



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