

# RAO MUHAMMAD UMER

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## Education

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- NOV 14 - OCT 16 **MS in Computer Science**, *Pakistan Institute of Engineering and Applied Sciences*, Nilore, Islamabad, Pakistan.  
Area: Computational Intelligence and Machine Learning  
CGPA: 3.45/4.0, ranked in top 5% of the class.
- SEP 10 - OCT 14 **BSc. in Computer Systems Engineering**, *The Islamia University of Bahawalpur*, Bahawalpur, Pakistan.  
Major Subjects: AI, Parallel and Distributed Computing, Image Processing  
CGPA: 3.82/4.0, ranked in top 5% of the class.
- SEP 08 - SEP 10 **FSc. in Pre-Engineering**, *Government Post Graduate College*, Sahiwal, Pakistan.  
Major Subjects: Mathematics, Physics, Chemistry  
Percentage average: 86%, 943/1100 Marks, ranked in top 5% of the class.
- MAR 06 - AUG 08 **Matriculation in Science**, *Lasani Public High School*, Sahiwal, Pakistan.  
Major Subjects: Mathematics, Physics, Chemistry, Biology  
Percentage average: 92%, 783/850 Marks, ranked in top 1% of the class.

## Research Interests

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**Data Science, Machine Learning, Deep Learning, Big Data Analytics, Computer Vision, Natural Language Processing, Information Retrieval and Data Mining, High Performance Computing.**

## Research Experience

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- JUN 16 - OCT 16 **MS Thesis**, *Pakistan Institute of Engineering and Applied Sciences*, Islamabad, Pakistan.  
• Deep Web Extractor (DWX): Content Discovery From Deep Web Using Large Scale Data Analytics Paradigm  
• Techniques: supervised learning, classification, structured learning  
• Data Size: 68 MB (Analyzed Web forms dataset) & 1 GB (Raw Webpages Dataset)
- SEP 13 - SEP 14 **Technical Report**, *The Islamia University of Bahawalpur*, Bahawalpur, Pakistan.  
• Spam Filtering System: Malicious Email Detection and Filtering System Using Bayesian Machine Learning Algorithm  
• Techniques: supervised learning, Bayesian learning, classification  
• Data Size: 15 MB (Analyzed spam & non-spam emails dataset)  
• Led a team of 4 undergrad Fellow to develop spam filtering system

## Teaching Experience

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- OCT 16 - PRESENT **Lecturer**, *Department of CS & IT, The University of Lahore*, Lahore, Pakistan.  
Summer 2017: • Data Structures and Algorithms (CS-2112)  
Spring 2017: • Digital Logic Design (CS-4349) • Business Computing (CS-1010)  
Fall 2016: • Programming Fundamentals - I (CS-1012) • Introduction to Information and Communication Technologies (CS-1010) • Digital Logic Design (CS-4349)  
Note: All taught courses links are available at: <http://raoumer.com/courses.html>

## Blog Writing

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JUL 20, 2017	<b>Data Science Resources</b> , <a href="http://raoumer.com/blog_posts/data_science_resources.html">http://raoumer.com/blog_posts/data_science_resources.html</a> .
JUL 10, 2017	<b>Machine Learning Resources</b> , <a href="http://raoumer.com/blog_posts/machine_learning_resources.html">http://raoumer.com/blog_posts/machine_learning_resources.html</a> .
JUN 25, 2017	<b>Deep Learning Resources</b> , <a href="http://raoumer.com/blog_posts/deep_learning_resources.html">http://raoumer.com/blog_posts/deep_learning_resources.html</a> .
APR 10, 2017	<b>Open Data Resources For Data Science Research</b> , <a href="http://raoumer.com/blog_posts/data_sources.html">http://raoumer.com/blog_posts/data_sources.html</a> .
MAR 11, 2017	<b>Current Machine Learning research directions</b> , <a href="http://raoumer.com/blog_posts/ml_research_problems.html">http://raoumer.com/blog_posts/ml_research_problems.html</a> .
JAN 16, 2017	<b>Building Machine Learning Systems with Python</b> , <a href="http://raoumer.com/blog_posts/building_ML_model.html">http://raoumer.com/blog_posts/building_ML_model.html</a> .
DEC 19, 2016	<b>Data Science Industrial Roles: Who Does What?</b> , <a href="http://raoumer.com/blog_posts/ds_industry_roles.html">http://raoumer.com/blog_posts/ds_industry_roles.html</a> .
AUG 06, 2016	<b>Deploying Data Apps with Flask, Github and Heroku</b> , <a href="http://raoumer.com/blog_posts/webappdev.html">http://raoumer.com/blog_posts/webappdev.html</a> .
JUN 18, 2016	<b>The Deep Web</b> , <a href="http://raoumer.com/blog_posts/deep_web.html">http://raoumer.com/blog_posts/deep_web.html</a> .

## Invited Talks and Presentations

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AUG 16	<b>Deep Learning &amp; GPUs</b> , <i>Introduction to DNNs workshop, Pakistan Institute of Engineering and Applied Sciences, Islamabad, Pakistan.</i>
FEB 16	<b>Implementation of Linear Regression and Multi-variate Regression on GPU</b> , <i>GPU Computing workshop, Pakistan Institute of Engineering and Applied Sciences, Islamabad, Pakistan.</i>

## Open Source Projects

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dwx	Deep Web Extractor System.	<a href="http://raoumer.com/dwx">http://raoumer.com/dwx</a>
docatpredapp	Document's Category Predictor Webapp.	<a href="http://doccategorypredictor.herokuapp.com">http://doccategorypredictor.herokuapp.com</a>
docWebClf	Documents & Webpages Classification.	<a href="http://raoumer.com/docs_classification">http://raoumer.com/docs_classification</a>
regrGPU	Linear & Multiple Regression on GPU.	<a href="http://raoumer.com/GPU-Workshop-PIEAS-2016">http://raoumer.com/GPU-Workshop-PIEAS-2016</a>

## Honors and Awards

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OCT 16	<b>Best MS Thesis Award</b> , <i>from Department of Computer and Information Sciences, PIEAS, Islamabad, Pakistan.</i>
NOV 14 - OCT 16	<b>PIEAS Fellowship by PIEAS IT-Endowment Fund</b> , <i>sponsored by Higher Education Commission(HEC) for MS Computer Science.</i>
SEP 10 - SEP 14	<b>Fully Funded National ICT Scholarship</b> , <i>by National ICT R &amp; D Fund for BSc. Computer Systems Engineering.</i>
JUN 11 - JUN 14	<b>Position Scholarship</b> , <i>by University College of Engineering and Technology, The Islamia University of Bahawalpur for excellent academic performance throughout undergraduate degree.</i>
SEP 10 - SEP 14	<b>Merit Scholarship</b> , <i>by Punjab Educational Endowment Fund(PEEF) for excellent academic performance in higher secondary school examination.</i>
OCT 08 - AUG 10	<b>Merit Scholarship</b> , <i>by Multan Board of Intermediate and Secondary Education for excellent academic performance in secondary school examination.</i>
AUG 06 - AUG 08	<b>Merit Scholarship</b> , <i>by Multan Board of Intermediate and Secondary Education for excellent academic performance in District level school examination.</i>

## Workshops & Trainings

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NOV 01 - 03, 2016	<b>Faculty Development Training</b> , <i>Contents: “ Teaching methodology, Curriculum Designing, Assessment ”</i> , The University of Lahore, Lahore, Pakistan.
SEP 15 - 16, 2016	<b>Deep Learning</b> , <i>Take part as a resource person</i> , Department of Computer & Information Sciences, PIEAS, Islamabad, Pakistan.
FEB 15 - 19, 2016	<b>General Purpose Computation on GPUs using CUDA C</b> , <i>Take part as a resource person</i> , Department of Computer & Information Sciences, PIEAS, Islamabad, Pakistan.
JUN 22 - JULY 9, 2015	<b>Python Programming in Engineering &amp; Applied Sciences</b> , <i>Take part as a student</i> , Department of Computer & Information Sciences, PIEAS, Islamabad, Pakistan.
JUN 01 - 15, 2013	<b>LAMP (Linux, Apache, MySQL, PHP) Server</b> , <i>Take part as a student</i> , Department of Computer System & Electronics Engineering, The Islamia University of Bahawalpur, Bahawalpur, Pakistan.

## Skills

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Languages	• Urdu: Native	• English: Fluent
Hobbies	• Cricket	• Reading Newspaper Columns
Programming	Python, C/C++, Java.	
Scientific Software	Theano, Scikits-learn, Scipy, Numpy, IPython, Jupyter Notebook, Matplotlib, Flask, Pandas, Anaconda Python, Heroku, Git, Latex.	
Computer Skills	Experienced in managing Linux and Windows systems.	

## Voluntary Work

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SEP 12 - MAY 14	<b>Member</b> , <i>Blood Donating Society</i> , The Islamia University of Bahawalpur, Bahawalpur, Pakistan.
NOV 08 - MAY 10	<b>Decision Committee Member</b> , <i>College Gardening and Other Infrastructure Maintenance</i> , Govt. Post Graduate College, Sahiwal, Pakistan.

## References

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<b>Dr. Muhammad Abid Mughal</b> Department of Computer Science, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan. ✉ mabidm@pieas.edu.pk	<b>Dr. Asifullah Khan</b> Department of Computer Science, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan. ✉ asif@pieas.edu.pk	<b>Dr. Fayyaz-ul-Amir</b> Department of Computer Science, Pakistan Institute of Engineering and Applied Sciences, Nilore, Islamabad, Pakistan. ✉ afsar@pieas.edu.pk
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