

# Emaad Ahmed Manzoor

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EDUCATION	<b>Carnegie Mellon University – H. John Heinz III College, USA</b> Ph.D., Information Systems. <span style="float: right;"><b>2016 –</b></span>
	<b>Stony Brook University, USA</b> <span style="float: right;"><b>2015 – 2016<sup>1</sup></b></span> Ph.D., Computer Science. Advisor: Leman Akoglu.
	<b>King Abdullah University of Science and Technology, Saudi Arabia</b> <span style="float: right;"><b>2013 – 2015</b></span> M.S., Computer Science. Advisor: Panos Kalnis. <span style="float: right;">GPA: 3.96 / 4.0</span> Thesis: Scheduling Broadcasts in a Network of Timelines.
	<b>Birla Institute of Technology and Science - Pilani, India</b> <span style="float: right;"><b>2008 – 2012</b></span> Bachelor of Engineering (Honors), Computer Science. <span style="float: right;">GPA: 8.17 / 10.0</span> Co-op host: Yahoo!, Bangalore, India.
PUBLICATIONS & PATENTS	<ol style="list-style-type: none"><li><i>RUSH! Targeted Time-limited Coupons via Purchase Forecasts.</i> <u>Emaad Manzoor</u>, Leman Akoglu. ACM SIGKDD 2017 (applied data science track, top 85/396 submissions).</li><li><i>Fast Memory-Efficient Anomaly Detection in Streaming Heterogenous Graphs.</i> <u>Emaad Manzoor</u>, Sadegh M. Milajerdi, Leman Akoglu. ACM SIGKDD 2016 (research track with oral, top 70/784 submissions).</li><li><i>Method and apparatus for scheduling broadcasts in social networks.</i> <u>Emaad Ahmed Manzoor</u>, Panos Kalnis. Filed February 2015 (USPTO, WPO).</li><li><i>Scheduling Broadcasts in a Network of Timelines.</i> <u>Emaad Ahmed Manzoor</u>, Haewoon Kwak, Panos Kalnis. Unpublished manuscript (extended version appears as a master's thesis), 2015.</li></ol>
AWARDS	<ul style="list-style-type: none"><li>CMU GSA/Provost Office Conference Funding Award (\$500). <span style="float: right;"><b>2017</b></span></li><li>ACM SIGKDD Student Travel Award (\$1,750). <span style="float: right;"><b>2016, 2017</b></span></li><li>Institute of Advanced Computational Science Young Writer's Award (\$500). <span style="float: right;"><b>2016</b></span></li><li>Stony Brook University Special CS Department Chair Fellowship (\$8,000). <span style="float: right;"><b>2015</b></span></li><li>Worldwide Top 100 (of 1720 teams), IEEE Xtreme 8.0 Programming Competition. <span style="float: right;"><b>2015</b></span></li><li>Best Mashery Hack &amp; Travel Grant, PennApps X, Philadelphia (\$500). <span style="float: right;"><b>2014</b></span></li><li>King Abdullah University of Science and Technology Fellowship (\$140,000)<sup>2</sup>. <span style="float: right;"><b>2013</b></span></li><li>Erasmus Mundus LCT Masters Scholarship (EUR 40,000)<sup>3</sup>. <span style="float: right;"><b>2013</b></span></li><li>Employee Performance Bonus, Yahoo! (INR 35,000). <span style="float: right;"><b>2012, 2013</b></span></li><li>Google Teaching Scholarship, BITS - Pilani, Goa Campus (INR 16,000)<sup>4</sup>. <span style="float: right;"><b>2011</b></span></li><li>Consultancy Development Cell Fellowship, Ministry of Science &amp; Tech., India (INR 10,000). <span style="float: right;"><b>2009</b></span></li></ul>
INDUSTRIAL EXPERIENCE (FULL-TIME)	<b>Yahoo!</b> , Bangalore. Software Engineer. <span style="float: right;"><b>Jul 2012 – Aug 2013</b></span> <ul style="list-style-type: none"><li>Built (team of 4) a system for streaming “trending-topic” detection from user-generated content.</li><li>Large impact within the company, improved over previous trend-detection latency by 600%.</li><li>Implemented with Apache Storm, Kafka, HBase and Java.</li></ul>

<sup>1</sup>Incomplete, transferred.

<sup>2</sup>\$70,000/year for two years including tuition (\$35,000), health insurance (\$15,000), stipend (\$20,000) and housing.

<sup>3</sup>Declined. Category A scholarship: EUR 20,000/year for two years. Awarded to 4 international applicants.

<sup>4</sup>For the undergraduate Software Development for Portable Devices course taught by Prof. Mangesh Bedekar.

INDUSTRIAL & RESEARCH EXPERIENCE (INTERN)	<p><b>Max Planck Institute for Software Systems</b>, Kaiserslautern. Research Intern. <b>Summer 2017</b>          Advised by Manuel Gomez-Rodriguez.</p> <ul style="list-style-type: none"> <li>• Research on crowdsourced knowledge markets and stochastic optimal control.</li> </ul> <p><b>Quantitative Engineering Design</b>, San Francisco (remote). Research Intern. <b>Summer 2015</b>          Advised by cofounders William Wu (Ph.D., EE, Stanford) and Jiehua Chen (Ph.D., Statistics, Stanford).</p> <ul style="list-style-type: none"> <li>• Designed and developed an online variant of a Bayesian model to predict financial fraud.</li> <li>• Developed a reference implementation of Mondrian Forests (online random forests).</li> <li>• Designed a distributed system architecture to enable online training of a classifier ensemble.</li> </ul> <p><b>Oregon State University</b>, Corvallis (remote). Google Summer of Code Intern. <b>Summer 2014</b></p> <ul style="list-style-type: none"> <li>• Designed and developed a REST service to enable IPMI operations over HTTP.</li> <li>• Designed and developed an extensible, hierarchical CLI that delegates to the REST service.</li> <li>• Design and implementation discussed at <a href="http://eyeshalfclosed.com/tags/#gsoc2014-ref">eyeshalfclosed.com/tags/#gsoc2014-ref</a>.</li> </ul> <p><b>Tachyon Technologies</b>, Bangalore. Research Intern. <b>Summer 2012</b>          Advised by cofounder and MIT TR35 awardee Ram Prakash Hanumanthappa.</p> <ul style="list-style-type: none"> <li>• Developed a fast, simple and effective algorithm to de-warp photographs of flat book pages.</li> <li>• Implemented an algorithm from the low-level vision literature to flatten color gradients.</li> <li>• Applied algorithms to transform photos of comic book pages into web-ready digital comic panels.</li> <li>• Packaged into an Android app interfacing with my code in MATLAB over a Python HTTP bridge.</li> </ul> <p><b>Yahoo!</b>, Bangalore. Software Engineer Intern. <b>Fall 2011</b></p> <ul style="list-style-type: none"> <li>• Extended the “trending-topic” detection system to be centrally configurable and multi-threaded.</li> <li>• Implemented a research prototype to detect geographically and demographically niche events.</li> <li>• Offered and accepted a full-time position (top 3/14 interns from BITS – Pilani University).</li> </ul> <p><b>University of Massachusetts</b>, Lowell (remote). MVHub Summer of Code Intern. <b>Summer 2011</b></p> <ul style="list-style-type: none"> <li>• Built a Debian package for MVHub, a directory of non-profit services.</li> <li>• Wrote Perl scripts to automate building and updating the Debian package.</li> <li>• Wrote a Launchpad recipe and set up a PPA to conveniently host and install the package from.</li> </ul>
TEACHING	<ul style="list-style-type: none"> <li>• Programming Languages and Compiler Design. Course project design and grading. <b>Spring 2012</b></li> <li>• MIT Indian Mobile Initiative. Android development lab sessions and tutoring. <b>Summer 2011</b></li> <li>• Software Development for Portable Devices. <b>Spring 2011</b></li> </ul>
SERVICE	<ul style="list-style-type: none"> <li>• External reviewer for SocInfo, WWW, EuroSys, VLDBJ, CIKM.</li> <li>• Organized TechFM, a weekly technical talk series at Yahoo! on math, science and technology.</li> <li>• Frequent participant at Random Hacks of Kindness.</li> </ul>
LANGUAGES	<ul style="list-style-type: none"> <li>• Analysis: Python (preferred)</li> <li>• Performance: C++ (preferred), Java (for distributed systems)</li> </ul>

SELECTED	All slides available at <a href="http://speakerdeck.com/emaadmanzoor">http://speakerdeck.com/emaadmanzoor</a> .	
TALKS	Videos available at <a href="http://eyeshalfclosed.com/talks/">http://eyeshalfclosed.com/talks/</a> .	
	<ul style="list-style-type: none"> <li>• <i>Fast Memory-efficient Anomaly Detection in Streaming Heterogenous Graphs</i>. <ul style="list-style-type: none"> <li>– ACM SIGKDD Conference (research-track oral presentation). <b>Aug 2016</b></li> <li>– CMU Database Group Seminar (hosted by Christos Faloutsos). <b>Oct 2016</b></li> <li>– RSA Laboratories (hosted by Zhou Li and Kevin Bowers). <b>Nov 2016</b></li> <li>– CMU Statistical Networks Seminar (hosted by Cosma Shalizi). <b>Nov 2016</b></li> </ul> </li> <li>• <i>Scheduling Broadcasts in a Network of Timelines</i>. Masters Thesis Defense, KAUST. <b>May 2015</b></li> <li>• <i>Time-Inconsistent Planning</i>. InfoCloud Research Group Seminar, KAUST. <b>May 2014</b></li> <li>• <i>Reviving Failed Classifiers with Random Forests</i>. Tech talk at Yahoo!. <b>May 2013</b></li> <li>• <i>Building a Linux cluster with Beanstalkd</i>. Tutorial at PyCon India. <b>Sep 2012</b></li> </ul>	

SELECTED All completed courses listed were awarded grades A- or higher. Fall 2017 courses are upcoming.

GRADUATE  
COURSEWORK

**Economics**

- Economining (Dokyun Lee, CMU) **Fall 2017**
- Introduction to Econometric Theory (Edson Severnini, CMU) **Spring 2017**
- Microeconomics (Brian Kovak, CMU) **Fall 2016**

**Statistics & Machine Learning**

- Convex Optimization (Aarti Singh, CMU) **Fall 2017**
- Advanced Introduction to Machine Learning (Barnabas Poczos, CMU) **Fall 2017**
- Intermediate Statistics (Larry Wasserman, CMU) **Fall 2016**

**Computer Science**

- Operating Systems (Michael Ferdman, Stony Brook University) **Fall 2015**
- Theory of Database Systems (Fusheng Wang, Stony Brook University) **Fall 2015**
- Artificial Intelligence (I.V. Ramakrishnan, Stony Brook University) **Fall 2015**
- Computational Complexity (Antoine Vigneron, KAUST) **Fall 2014**
- Probability and Random Processes (Mohammed-Slim Alouini, KAUST) **Fall 2014**
- Machine Learning (Xiangliang Zhang, KAUST) **Spring 2013**
- Advanced Topics in Data Management (Panos Kalnis, KAUST) **Spring 2013**
- Data Analytics (Xin Gao, KAUST) **Fall 2013**
- Computing Systems and Concurrency (Hany Ramadan, KAUST) **Fall 2013**
- Design and Analysis of Algorithms (Mikhael Moshkov, KAUST) **Fall 2013**