

# Yusuf H. Roohani

CONTACT	www.yusufroohani.com	yusuf.roohani@gmail.com	Linkedin
EDUCATION	<b>Carnegie Mellon University</b> , Pittsburgh, PA <span style="float: right;"><i>Jan 2014 - Aug 2015</i></span> M.S., Mechanical Engineering. <span style="float: right;">GPA: 4.0/4.0</span> Coursework: Machine Learning, Computer Systems, Robot Kinematics and Dynamics, Computational Fluid Dynamics, Microfluidics, Microelectromechanical Systems		
	<b>Vellore Institute of Technology</b> , Vellore, India <span style="float: right;"><i>Jul 2009 - Jun 2013</i></span> B.Tech., Mechanical Engineering. <span style="float: right;">GPA: 8.81/10</span> <b>GRE</b> : Verbal: (99 percentile) 168/170, Quant: (95 percentile) 168/170 <span style="float: right;">336/340</span>		
COURSEWORK WHILE WORKING FULL-TIME	<b>Harvard Extension School</b> , Cambridge, MA <span style="float: right;"><i>Jul 2016 - May 2017</i></span> Linear Algebra & Real Analysis (MATH-23A), <span style="float: right;">GPA: 4.0/4.0</span> Mathematical Foundations of Statistical Software (25141) <b>Stanford University School of Medicine</b> , Stanford, CA <span style="float: right;"><i>Feb 2017 - Mar 2018</i></span> Computational Methods for Biomedical Image Analysis (BMI-260) <span style="float: right;">GPA: 3.7/4.0</span>		
WORK EXPERIENCE	<b>GlaxoSmithKline</b> , Cambridge, MA <span style="float: right;"><i>Nov 2017 - Present</i></span> Investigator (Early Promotion) <ul style="list-style-type: none"> <li>• Conducting machine learning research to uncover new drug targets and lead molecules</li> <li>• Leading the development of a scalable computer vision platform for cellular imaging</li> <li>• Aligning disparate data sets with imaging data, changing how hits are discovered.</li> <li>• Created and lead company-wide machine learning journal club, monthly attendance &gt;30</li> </ul> <b>GlaxoSmithKline</b> , Waltham, MA <span style="float: right;"><i>Jul 2016 - Oct 2017</i></span> Data Scientist <ul style="list-style-type: none"> <li>• Main efforts: Designing deep learning solutions for cellular imaging, histopathology</li> <li>• Designed regular feedforward approaches as well as generative models, with validation</li> <li>• Active contributor to team strategy, leadership engagement, academic collaborations</li> </ul> <b>Theranos Inc.</b> , Palo Alto, CA <span style="float: right;"><i>May 2016 - Jun 2016</i></span> Associate Scientist, Modeler <ul style="list-style-type: none"> <li>• Independently designed statistical and mechanistic approaches to realistically predict onset of disease using blood testing data</li> </ul> <b>Merrimack Pharmaceuticals</b> , Cambridge, MA <span style="float: right;"><i>Sep 2015 - Apr 2016</i></span> Computational Modeler Intern <ul style="list-style-type: none"> <li>• Developed dynamic system models to mechanistically simulate signaling networks in cancer</li> <li>• Compared results against patient data to identify biomarkers for patient stratification</li> <li>• Main focus: Stochastic optimization, regularization, parameter estimation</li> </ul> <b>Carnegie Mellon University</b> , Pittsburgh, PA <span style="float: right;"><i>May 2014 - Aug 2015</i></span> Research Assistant <ul style="list-style-type: none"> <li>• Led an NETL sponsored project to model impacts of shale development on ozone, PM<sub>2.5</sub></li> <li>• Published policy recommendations based on results and current federal regulations.</li> </ul>		

	<p><b>Tata Industries</b>, Mumbai, India</p> <p>Technical Analyst Intern <span style="float: right;"><i>Sep 2013 - Nov 2013</i></span></p> <ul style="list-style-type: none"> <li>Studied the latest research in material science under the strategic venture capital division</li> <li>Advised board on investments in commercially viable options through market research</li> </ul>
SKILLS	<p><b>Computer Programming:</b> Python, R, C, C++, Fortran, Bash, OWL/SWRL</p> <p><b>Applications:</b> Tensorflow, MATLAB, L<sup>A</sup>T<sub>E</sub>X, Git, SQL, SolidWorks, Protege, Caffe</p>
POSTERS	<p><b>Roohani, Y.</b>, Accelerating Phenotypic Drug Discovery using Deep Learning based Image Analysis <i>New York Academy of Science, Symp. Deep Learning in Drug Discovery</i>, 2018</p> <p><b>Roohani, Y.</b>, Hoffman, A., Musso, R., Richmond, N., Deep Learning for Robust Phenotyping of High Content Cellular Images <i>High Content Analysis</i>, 2017</p> <p>Curley, M., Tan, G., Yannatos, I., Camblin, A., <b>Roohani, Y.</b>, Iadevaia, S., Louis, C., Lugovskoy, A. Istiratumab (MM-141), a bispecific antibody targeting IGF-1R and ErbB3, inhibits pro-survival signaling in vitro ... <i>AACR</i>, 2016. Abstract nr 1209.</p>
PUBLICATIONS	<p><b>Roohani Y.</b>, Kiss E., Improving Accuracy of Nuclei Segmentation by Reducing Histological Image Variability. In: Stoyanov D. et al. (eds) Computational Pathology and Ophthalmic Medical Image Analysis. MICCAI, COMPAY 2018. <i>LNCS</i>, vol 11039. Springer, 2018</p> <p>Shokoohi H., LeSaux M., <b>Roohani Y.</b>, Litepio A., Huang C., Blaivas M. Enhanced point-of-care ultrasound applications by integrating automated feature-learning systems using deep learning, <i>J Ultrasound Med.</i>, (In Press) 2018</p> <p><b>Roohani, Y.</b>, Roy, A., Heo, J., Robinson, A., &amp; Adams, P. Impact of natural gas development in the Marcellus and Utica Shales on regional ozone and fine particulate matter levels. <i>Atmospheric Environment</i>, 2017.</p>
INVITED TALKS	<p><b>Accelerating High Throughput Drug Discovery Using Deep Learning</b> ReWork, Deep Learning for Healthcare, Boston 2018</p>
HONORS AND AWARDS	<p><b>GSK Exceptional Science Award</b> For application and embedding of deep learning to the challenge of phenotyping cellular images (\$17000 in cash and shares) <span style="float: right;"><i>(2018)</i></span></p> <p><b>GSK R&amp;R Award</b> For significant efforts at training colleagues in data science <span style="float: right;"><i>(2018)</i></span></p> <p><b>Advisory Board Member</b> Serving on the board for MS in Data Analytics at Tufts University Graduate School of Arts and Sciences <span style="float: right;"><i>(2018)</i></span></p> <p><b>Ranked in top 11%</b> as a one-person team in the 2018 Kaggle Data Science Bowl for segmenting nuclei in optical microscopy images <span style="float: right;"><i>(2018)</i></span></p> <p><b>Data Study Group Participant</b> Selected to participate in a data study group (with paid travel and accomodation) at the Alan Turing Institute in London, UK. <span style="float: right;"><i>(2018)</i></span></p> <p><b>Research Assistantship</b> Awarded a PhD level research stipend as a Master's student <span style="float: right;"><i>(2015)</i></span></p> <p><b>Undergraduate Research Assistantship</b> Tuition covered for spending a semester at a nanotechnology research centre at Purdue University for my undergraduate thesis <span style="float: right;"><i>(2013)</i></span></p> <p><b>Merit Certificate for Academic Excellence</b> (International student category) for each of the 4 years in college <span style="float: right;"><i>(2010/11/12/13)</i></span></p>
EXTRA-CURRICULARS	<p><b>Executive Director of the Debate Society, VIT</b> <span style="float: right;"><i>Jul 2010 - May 2012</i></span></p> <p>Personally trained more than 50 fellow students in effective argumentation through organizing and conducting regular sessions and debates. Independently drafted a written constitution.</p>