

Yusuf H. Roohani

CONTACT	www.yusufroohani.com	yusuf.roohani@gmail.com	Linkedin
EDUCATION	<p>Carnegie Mellon University, Pittsburgh, PA <i>Jan 2014 - Aug 2015</i> M.S., Mechanical Engineering. GPA: 4.0/4.0 Coursework: Machine Learning, Computer Systems (15-213), Robot Kinematics and Dynamics, Computational Fluid Dynamics, Microfluidics, Microelectromechanical Systems</p> <p>Vellore Institute of Technology, Vellore, India <i>Jul 2009 - Jun 2013</i> B.Tech., Mechanical Engineering. GPA: 8.81/10 GRE: Verbal: (99 percentile) 168/170, Quant: (95 percentile) 168/170 336/340</p>		
COURSEWORK WHILE WORKING FULL-TIME	<p>Harvard Extension School, Cambridge, MA <i>Jul 2016 - May 2017</i> Linear Algebra & Real Analysis (23A), Mathematical Statistics (E-156), GPA: 4.0/4.0 Data Structures and Algorithms (CS-124)</p>		
WORK EXPERIENCE	<p>GlaxoSmithKline, Cambridge, MA <i>Apr 2019 - Present</i> Manager, Machine Learning Engineer GlaxoSmithKline, Cambridge, MA <i>Nov 2017 - Mar 2019</i> Investigator</p> <ul style="list-style-type: none"> • Leading a team of 4 to develop a computer vision platform for high throughput discovery • Relating phenotypic readouts from cellular imaging with other datatypes eg: genomics • Designing both the models and the end to end software workflows • Created and lead company-wide machine learning journal club, monthly attendance >30 <p>GlaxoSmithKline, Waltham, MA <i>Jul 2016 - Oct 2017</i> Data Scientist</p> <ul style="list-style-type: none"> • Conducting machine learning research to uncover new drug targets and lead molecules • Main efforts: Designing deep learning solutions for cellular imaging, histopathology • Designed regular feedforward approaches as well as generative models, with validation • Active contributor to team strategy, leadership engagement, academic collaborations <p>Theranos Inc., Palo Alto, CA <i>May 2016 - Jun 2016</i> Associate Scientist, Modeler</p> <ul style="list-style-type: none"> • Designed statistical & mechanistic approaches to predict disease onset using blood testing <p>Merrimack Pharmaceuticals, Cambridge, MA <i>Sep 2015 - Apr 2016</i> Computational Modeler Intern</p> <ul style="list-style-type: none"> • Developed dynamic system models to mechanistically simulate signaling networks in cancer • Compared results against patient data to identify biomarkers for patient stratification <p>Carnegie Mellon University, Pittsburgh, PA <i>May 2014 - Aug 2015</i> Research Assistant</p> <ul style="list-style-type: none"> • Led an NETL sponsored project to model impacts of shale development on ozone, PM_{2.5} • Published policy recommendations based on results and current federal regulations. 		

	<p>Tata Industries, Mumbai, India</p> <p>Technical Analyst Intern <i>Sep 2013 - Nov 2013</i></p> <ul style="list-style-type: none"> • Studied the latest research in material science under the strategic venture capital division • Advised board on investments in commercially viable options through market research
SKILLS	<p>Computer Programming: Python, R, C, C++, Fortran, Bash, OWL/SWRL</p> <p>Applications: Tensorflow, MATLAB, L^AT_EX, Git, SQL, SolidWorks, Protege, Caffe</p>
POSTERS	<p>Roohani Y., Sajid N., Hope T., Price C., Madhyastha P., Predicting Language Recovery after Stroke with Convolutional Networks on Stitched MRI, <i>NeurIPS ML4H Workshop</i>, 2018</p> <p>Roohani, Y., 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>Roohani, Y., 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., Roohani, Y., 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>Roohani Y., 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., Roohani Y., 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>, 2018</p> <p>Roohani, Y., Roy, A., Heo, J., Robinson, A., & 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>Accelerating High Throughput Drug Discovery Using Deep Learning ReWork, Deep Learning for Healthcare, Boston 2018</p>
REVIEWING	<p>MICCAI</p>
HONORS AND AWARDS	<p>GSK Exceptional Science Award For application and embedding of deep learning to the challenge of phenotyping cellular images (\$17000 in cash and shares) (2018)</p> <p>GSK R&R Award For significant efforts at training colleagues in data science (2018)</p> <p>Advisory Board Member Serving on the board for MS in Data Analytics at Tufts University Graduate School of Arts and Sciences (2018)</p> <p>Data Study Group Participant Selected to participate in a data study group (with paid travel and accomodation) at the Alan Turing Institute in London, UK. (2018)</p> <p>Research Assistantship Awarded a PhD level research stipend as a Master's student (2015)</p> <p>Undergraduate Research Assistantship Tuition covered for spending a semester at a nanotechnology research centre at Purdue University for my undergraduate thesis (2013)</p> <p>Merit Certificate for Academic Excellence (International student category) for each of the 4 years in college (2010/11/12/13)</p>
EXTRA-CURRICULARS	<p>Executive Director of the Debate Society, VIT <i>Jul 2010 - May 2012</i></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>