

Yusuf H. Roohani

CONTACT	www.yusufroohani.com	yhr@cs.stanford.edu	Linkedin
EDUCATION	Stanford University , Stanford, CA <i>Jan 2020 - Present</i> Ph.D., Biomedical Data Science, Advisor: Jure Leskovec <i>Graph representation learning, experiment design for high throughput biology</i>		
	Carnegie Mellon University , Pittsburgh, PA <i>Jan 2014 - Aug 2015</i> M.S., Mechanical Engineering. Advisor: Peter Adams, Allen Robinson GPA: 4.0/4.0 <i>Machine Learning, Computer Systems, Robotics, Fluid Dynamics</i>		
	Vellore Institute of Technology , Vellore, India <i>Jul 2009 - Jun 2013</i> B.Tech., Mechanical Engineering. GPA: 8.81/10 GRE : Verbal: (98 percentile) 168/170, Quant: (94 percentile) 168/170 336/340		
WORK EXPERIENCE	GlaxoSmithKline , San Francisco, CA <i>Jan 2020 - Present</i> AI/ML Engineer Employed at GSK during PhD at Stanford. No restrictions on PhD research. See Awards		
	Manager, Machine Learning Engineer , Cambridge, MA <i>Apr 2019 - Jan 2020</i> <ul style="list-style-type: none">Industrializing an end-to-end machine learning system for phenotypic drug discoveryApplied to an active program for discovering new biological targets, progressed to validation		
	Investigator <i>Nov 2017 - Mar 2019</i> <ul style="list-style-type: none">Leading a team of 4 to develop a computer vision platform for high throughput discoveryRelating phenotypic readouts from cellular imaging with other datatypes eg: genomicsCreated and lead company-wide machine learning journal club, monthly attendance >30		
	Data Scientist <i>Jul 2016 - Oct 2017</i> <ul style="list-style-type: none">Conducted machine learning research to uncover new drug targets and lead moleculesMain efforts: Designing deep learning solutions for cellular imaging, histopathologyActive contributor to team strategy, leadership engagement, academic collaborations		
	Theranos Inc. , Palo Alto, CA <i>May 2016 - Jun 2016</i> Associate Scientist, Modeler <ul style="list-style-type: none">Designed statistical & mechanistic approaches to predict diabetes onset using blood testing		
	Merrimack Pharmaceuticals , Cambridge, MA <i>Sep 2015 - Apr 2016</i> Computational Modeler Intern <ul style="list-style-type: none">Developed dynamic system models to mechanistically simulate signaling networks in cancerCompared results against patient data to identify biomarkers for patient stratification		
	Carnegie Mellon University , Pittsburgh, PA <i>May 2014 - Aug 2015</i> Research Assistant <ul style="list-style-type: none">Led a DOE 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
HONORS AND AWARDS	<p>Full PhD funding awarded by GSK, including tuition + regular full-time pay for 5yr <i>(2019)</i> without any requirement to work during PhD.</p> <p>GSK Exceptional Science Award For application and embedding of deep learning <i>(2018)</i> to the challenge of phenotyping cellular images (\$17000 in cash and shares)</p> <p>Advisory Board Member for MS in Data Analytics program at Tufts University <i>(2018)</i></p> <p>Data Study Group Participant: Paid travel, stay at the Alan Turing Institute <i>(2018)</i></p> <p>Research Assistantship Awarded a PhD level research stipend as a Master's student <i>(2015)</i></p> <p>Undergraduate Research Assistantship Tuition covered for spending a semester at a nanotechnology research centre at Purdue University for my undergraduate thesis <i>(2013)</i></p> <p>Merit Certificates, Academic Excellence (International student) (x4) <i>(2010/11/12/13)</i></p>
SKILLS	<p>Computer Programming: Python, R, C, C++, Fortran, Bash, OWL/SWRL</p> <p>Applications: Tensorflow, PyTorch, MATLAB, L^AT_EX, Git, SQL, SolidWorks, Protege</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> <p>Guest Lecture: Data Analytics and Machine Learning in Drug Discovery. Foundations of Data Analytics, School of Engineering, Tufts University, 2019</p> <p>Assessing biological diversity of a compound collection using high throughput cellular imaging Society for Lab Automation and Screening Conference, 2020</p>
REVIEWING	<p>MICCAI (2019)</p>

SELECTED	Institution	Course	Number	Grade	Term
COURSEWORK	Stanford	Machine Learning	CS 229	A	Spring 2020
	Stanford	Fundamentals of Real Analysis	MATH 171	A	Spring 2020
	Stanford	Machine Learning with Graphs	CS 224W	A	Fall 2019
	CMU	Introduction to Computer Systems	15-213	A	Summer 2015
EXTRA-	Executive Director of the Debate Society, VIT				
CURRICULARS	<i>Jul 2010 - May 2012</i> Personally trained more than 50 fellow students in effective argumentation through organizing and conducting regular sessions and debates. Independently drafted a written constitution.				