

Wei Cheng

164 Angell Street, Brown University
Providence, RI, 02912
(401)330-9294
wei_cheng1@brown.edu

EDUCATION	Brown University Ph.D, Computer Science and Computational Biology Advisor: Sohini Ramachandran	Aug 2017 - Present
	Cornell University Bachelor of Science, Computational Biology	Aug 2014 - May 2016
	China Agricultural University	Aug 2012 - May 2014
RESEARCH EXPERIENCE	Research Assistant <i>Jian Lu Lab, Peking University</i>	Oct. 2016 - Jan. 2017
	Research Assistant <i>Andrew Clark Lab, Cornell University</i>	May. 2015 - Sep. 2016
PUBLICATIONS (* CO-FIRST AUTHORS)		
[1] W. Cheng , G. Darnell, S. Ramachandran, and L. Crawford (2020). Generalizing Variational Autoencoders with Hierarchical Empirical Bayes. <i>arXiv:2007.10389</i>		
[2] P. Demetci*, W. Cheng* , G. Darnell, X. Zhou, S. Ramachandran, and L. Crawford (2020). Multi-scale genomic inference using biologically annotated neural networks. <i>bioRxiv.184465</i> .		
[3] W. Cheng , S. Ramachandran, and L. Crawford (2020). Estimation of non-null SNP effect size distributions enables the detection of enriched genes underlying complex traits. <i>PLOS Genetics.16(6): e1008855</i> .		
SOFTWARE	[1] BANNs : Biologically Annotated Neural Networks	
	[2] HEBAE : Hierarchical Empirical Bayes Auto-Encoder	
	[3] gene-ϵ : A Recalibrated Hypothesis Test for Sets of SNP-Level Summary Statistics	
CONFERENCES	“Estimating gene-level effect sizes using summary statistics”, <i>Probabilistic Modeling in Genomics</i> , Cold Spring Harbor, USA (Nov.2018).	
	“Epsilon-Genic Effects Bridge the Gap Between Polygenic and Omnigenic Complex Traits”, <i>Probabilistic Modeling in Genomics</i> , Aussois, France (Oct.2019).	
Programming SKILLS	R, Python, Matlab, JAVA, Linux.	

COURSES

Advanced Probabilistic Methods, Deep Learning, Machine Learning, Computer Vision, Algorithm for Computational Biology, Statistical Inference in Genomics, Programming and Data Structure.

TEACHING

Teaching assistant, Brown University
Statistical Analysis of Biological Data.