

Wei Cheng

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EDUCATION	Brown University	Aug 2017 - Present
	Ph.D. in Computer Science and Computational Biology	
	M.S. in Computer Science	
	Cornell University	Aug 2014 - May 2016
	B.S. in Computational Biology	
	China Agricultural University	Aug 2012 - May 2014
RESEARCH EXPERIENCE	Peking University	Oct 2016 - Jan 2017
	Research Assistant, Jian Lu Lab	
	Cornell University	May 2015 - Sep 2016
	Research Assistant, Andrew Clark Lab	
PUBLICATIONS (* CO-FIRST AUTHORS)		
[1] W. Cheng , G. Darnell, S. Ramachandran, and L. Crawford (2020). Generalizing Variational Autoencoders with Hierarchical Empirical Bayes. <i>arXiv</i> :2007.10389		
[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</i> .184465.		
[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</i> .16(6): e1008855.		
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).	
	“A gradient-based variable selection and heritability estimation method using penalized neural network”, <i>Genome Informatics</i> , Virtual Conference (Sep 2020).	
SKILLS	R, Python, Matlab, JAVA, Linux.	
COURSES	Advanced Probabilistic Methods, Deep Learning, Deep Learning in Genomics, Machine Learning, Computer Vision, Algorithm for Computational Biology, Statistical Inference in Genomics, Programming and Data Structure.	
TEACHING	Teaching assistant – Statistical Analysis of Biological Data	