

Wei Cheng

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EDUCATION	Brown University	Aug 2017 - Present
	Ph.D, Computer Science and Computational Biology Advisor: Sohini Ramachandran	
	Cornell University	Aug 2014 - May 2016
	Bachelor of Science, Computational Biology	
	China Agricultural University	Aug 2012 - May 2014

RESEARCH EXPERIENCE	Research Assistant	Oct 2016 - Jan 2017
	<i>Jian Lu Lab, Peking University</i>	
	Research Assistant	May 2015 - Sep 2016
	<i>Andrew Clark Lab, Cornell University</i>	

PUBLICATIONS (* CO-FIRST AUTHORS)

- [1] **W. Cheng**, G. Darnell, S. Ramachandran, and L. Crawford (2020). Generalizing Variational Autoencoders with Hierarchical Empirical Bayes. *arXiv: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. *bioRxiv.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. *PLOS Genetics.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).

Programming SKILLS	R, Python, Matlab, JAVA, Linux.
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COURSES	Advanced Probabilistic Methods, Deep Learning, Machine Learning, Computer Vision, Algorithm for Computational Biology, Statistical Inference in Genomics, Programming and Data Structure.
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TEACHING

Teaching assistant, Brown University
Statistical Analysis of Biological Data.