

# Baihan Lin

baihan.lin@columbia.edu | +1-206-915-1164  
www.baihan.nyc | github.com/doerlbh | twitter.com/doerlbh

Machine Learning • Neuroscience • Deep Learning • Applied Math • Speech • Biomedical Informatics • Psychology • HCI

## EDUCATION

### Columbia University (CU)

Zuckerman Mind Brain Behavior Institute, CU Medical Center  
2017.09 - 2022.06 (expected) | New York, USA

Computational Neuroscience **Ph.D.** 22'

Computational & Systems Biology **M.Phil.** 20'

Cellular & Molecular Biomedical Studies **M.A.** 19'

### University of Washington (UW)

Department of Applied Mathematics  
2017.09 - 2020.06 | Seattle, USA

Applied Mathematics **M.S.** 20'

NIH Computational Neuroscience Training Program  
2013.09 - 2017.06 | Seattle, USA

Applied & Computational Mathematics **B.S.** 17'

Psychology – Honors Program **B.A.** 17'

## GRADUATE COURSEWORK

### Applied Mathematics

UW: Adv. Linear Algebra & Numerical Analysis (A-)  
UW: Methods for Partial Differential Equations (A-)  
UW: Probability & Stochastic Process (A-)  
UW: Mathematical Theory of Cellular Dynamics (A-)  
UW: Computational Methods for Data Analysis (A-)

### Computer Science

CU: Bandits & Reinforcement Learning (A+)  
GT: Software Development Process (A)  
GT: Adv. Artificial Intelligence (A)  
UW: High-Performance Computing (A+)

### Systems Biology

UW: Mathematical Analysis in Biology & Medicine (A+)  
CU: Genomics of Gene Regulation (A)

### Theoretical Neuroscience

CU: Intro. to Theoretical Neuroscience (A)  
CU: Adv. Topics in Theoretical Neuroscience (A-)  
CU: Systems & Developmental Neurobiology (A)

## RECOGNITIONS

### Grants

2019 - 2020	Conference	6 x Conference Travel Grants	by	IJCAI-20, INTERSPEECH-20, MICCAI-20, IJCAI-19, NeurIPS-19, ISMB-19
2017 - 2018	University	Cloud Computing Grant	by	University of Washington RCC
2014 - 2016	NIH	Comp Neuro Training Grant	by	NIH on UW CompNeuro students

### Fellowships

2017	University	Systems Biology Fellowship	by	Columbia University
2017	University	Prestigious Fellowship	by	UC Berkeley (Nominated)
2017	University	Dean's Prize Fellowship	by	Rice University (Declined the offer)
2016 - 2017	Industry	Amazon Catalyst Fellowship	by	Amazon on OsteoApp
2015 - 2016	Industry	Mary Gates Scholarship	by	Bill & Melinda Gates Foundation
2013 - 2017	University	Dean's List Scholarship	by	University of Washington
2011 - 2012	Industry	Tencent Scholarship	by	Tencent

### Awards

Engineering Olympiads	iGEM 2013 (Gold); MIT EurekaFest 2011 (Merit)
	WCA-Math 2009 (2nd); NChemO 2011 (3rd); NChemO 2011, NBioO 2011, NOInfo 2009 (GD 2nd)

# RESEARCH

## Independent projects

On bandits/RL [C8], topology [E3], audio [P8][C7], computer vision [C6] and information theory [P11][P4][C2].

## IBM Research

- ★ E-Psychiatry (Host: [G. Cecchi](#)); AI Foundations (Host: [I. Rish](#), [D. Bouneffouf](#)) PhD Research Intern  
2017/2018/2019/2020.07 – .09 | Yorktown Heights, USA [P6][P5][P9][C5][C3][C1][E7][E6][E4]  
Project: develop neuro-inspired reinforcement learning for computational phenotyping and behavioral modeling.

## Microsoft Research

- ★ HCI; EPIC-Extended Perception, Interaction, & Cognition (Host: [M. Gonzalez-Franco](#)) Visiting PhD Student  
2017.05 – 2017.08 | Redmond, USA [P7]  
Project: create perceptual illusion of mental representation in immersive virtual reality with haptic feedback.

## Columbia University

- ★ Visual Inference & Computational Neuroscience Group (PI: [N. Kriegeskorte](#)) PhD Candidate  
2018.07 – Present | New York, USA [P10][P3][P2][P1][C4][E5]  
Project: infer and visualize representational dynamics and topology across brain and computational models.

- Center for Theoretical Neuroscience (PI: [N. Qian](#)) Rotation  
2018.08 – 2020.01 | New York, USA [P11][P4][C2]  
Project: study perception with topological representations and biologically plausible neural network models.

- Center for Topology of Cancer Evolution and Heterogeneity (PI: [R. Rabadan](#)) Rotation  
2018.04 – 2018.06 | New York, USA [E5][E3]  
Project: study germline mutations with attention-based deep learning; high-dimensional topological visualization.

- Computational Biology Group of CS (PI: [I. Pe'er](#)) Rotation  
2017.06 – 2017.12 | New York, USA [E2]  
Project: identify gait-based biomarkers in Parkinson's patients via wearable devices and machine learning.

## University of Washington

- Ubiquitous Computing Lab of CSE and EE (PI: [S. Patel](#)) Research Assistant  
2017.03 – 2017.12 | Seattle, USA [pdf](#) [git](#)  
Project: OsteoApp – a smartphone osteoporosis screening app via gyroscope sensor and machine learning.

- Institute for Protein Design of BioE & CSE (PI: [D. Baker](#)) Research Assistant  
2015.06 – 2017.06 | Seattle, USA [J5]  
Project: algorithmic self-assembly of *de novo* alphabetic protein design into 2d lattice array.

- Mathematical Biology and Biophysical Chemistry Lab of AMath (PI: [H. Qian](#)) Research Assistant  
2016.06 – 2016.09 | Seattle, USA [pdf](#) [git](#)  
Project: simulation of DNA polymer dynamics and stochastic gene expression of RNA interference.

- Vision Neuroscience Lab of Psych (PI: [J. Olavarria](#)) Research Assistant  
2014.01 – 2016.06 | Seattle, USA [J6][E1]  
Project: developmental neural plasticity of ocular dominance columns in visual cortex.

## Beijing Institute of Microbiology & Epidemiology

- State Key Lab of Pathogen and Biosecurity (PI: [Y. Teng](#)) Research Intern  
2014.07 – 2017.06 (remote collab) | Beijing, China [J4][J3][J2][J1]  
Project: model virus epidemic, analyze genomic entropy, mine epigenetic signatures from databases.

## BGI Research

- Personalized Genome Group, Human Health Application Lab (Host: [H. Cao](#)) Bioinformatics R & D Intern  
2013.07 – 2013.09 | Shenzhen, China [pdf](#) [git](#)  
Project: bioinformatic analysis and literature review on "Autism Genome 10k" project.

- Unit of Synthetic Biology (Host: [S. Kang](#)) Laboratory Engineering Intern  
2013.07 – 2013.09 | Shenzhen, China [pdf](#)  
Project: design and engineer a synthetic yeast-based cell cycle reporting and regulating system.

# PUBLICATIONS

## Preprints or Manuscripts

- [P11] [Baihan Lin](#), “Constraining implicit space with minimum description length: an unsupervised attention mechanism across neural network layers,” *arXiv, Under review in CVPR*, 2021.
- [P10] [Baihan Lin](#) and N. Kriegeskorte, “Adaptive geo-topological independence criterion,” *arXiv, Under review in AISTATS*, 2021.
- [P9] [Baihan Lin](#), D. Bouneffouf, and G. Cecchi, “Predicting human decision making in psychological tasks with recurrent neural networks,” *arXiv, Under review in ICASSP*, 2021.
- [P8] [Baihan Lin](#) and X. Zhang, “Speaker diarization as a fully online learning problem in MiniVox,” *arXiv, Under review in ICASSP*, 2021.
- [P7] C. Berger, [Baihan Lin](#), B. Lenggenhager, J. Lanier, and M. Gonzalez-Franco, “Follow your nose: extended arm reach after Pinocchio illusion in virtual reality,” *Under review in Nature Scientific Reports*, 2020.
- [P6] [Baihan Lin](#), D. Bouneffouf, and G. Cecchi, “Online learning in iterated prisoner’s dilemma to mimic human behavior,” *arXiv, In submission to IJCAI*, 2021.
- [P5] [Baihan Lin](#), D. Bouneffouf, and G. Cecchi, “An empirical study of human behavioral agents in bandits, contextual bandits and reinforcement learning,” *arXiv, In submission to IJCAI*, 2021.
- [P4] [Baihan Lin](#), “Note on approximating MDL in neural networks,” *In submission in Neural Computation*, 2020.
- [P3] H. Schuett, J. Diedrichsen, [Baihan Lin](#), A. Kipnis, and N. Kriegeskorte, “Statistical inference on representational geometries,” *In preparation*, 2020.
- [P2] H. Schuett, [Baihan Lin](#), J. Diedrichsen, and N. Kriegeskorte, “PyRSA: A Python toolbox for representational similarity analysis,” *In preparation*, 2020.
- [P1] [Baihan Lin](#) and N. Kriegeskorte, “Representational geometry of low-level vision in mouse brain,” *In preparation*, 2020.

## Peer-Reviewed Journals

- [J6] A. Andelin, Z. Doyle, R. Laing, J. Turecek, [Baihan Lin](#), and J. Olavarria, “Influence of ocular dominance columns and patchy callosal connections on binocularity in lateral striate cortex: long Evans vs. albino rats,” *Journal of Comparative Neurology*, vol. 528, no. 4, pp. 650–663, 2020.
- [J5] Z. Chen, M. Johnson, J. Chen, M. Bick, S. Boyken, [Baihan Lin](#), J. De Yoreo, J. Kollman, D. Baker, and F. DiMaio, “Self-assembling 2D Arrays with *de novo* protein building blocks,” *Journal of the American Chemical Society*, vol. 141, no. 22, pp. 8891–8895, 2019.
- [J4] Y. Teng, D. Bi, G. Xie, Y. Jin, Y. Huang, [Baihan Lin](#), X. An, D. Feng, and Y. Tong, “Dynamic forecasting of Zika epidemics using Google Trends,” *PLOS ONE*, vol. 12, no. 1, p. e0165085, 2017.
- [J3] Y. Teng, D. Bi, G. Xie, Y. Jin, Y. Huang, [Baihan Lin](#), X. An, Y. Tong, and D. Feng, “Model-informed risk assessment for Zika virus outbreaks in the Asia-Pacific regions,” *Journal of Infection*, vol. 74, no. 5, pp. 484–491, 2017.
- [J2] Y. Teng, S. Liu, X. Guo, S. Liu, Y. Jin, T. He, D. Bi, P. Zhang, [Baihan Lin](#), X. An, *et al.*, “An integrative analysis reveals a central role of P53 activation via MDM2 in Zika virus infection induced cell death,” *Frontiers in Cellular and Infection Microbiology*, vol. 7, p. 327, 2017.
- [J1] Y. Teng, Y. Wang, X. Zhang, W. Liu, H. Fan, H. Yao, [Baihan Lin](#), P. Zhu, *et al.*, “Systematic genome-wide screening and prediction of microRNAs in EBOV during the 2014 Ebolavirus outbreak,” *Nature Scientific Reports*, vol. 5, p. 9912, 2015.

## Peer-Reviewed Conference Proceedings

- [C8] [Baihan Lin](#), “Online semi-supervised learning in contextual bandits with episodic reward,” in *Proceeding of AJCAI*, (Cambera, Australia), November 2020.
- [C7] [Baihan Lin](#) and X. Zhang, “VoiceID on the fly: a speaker recognition system that learns from scratch,” in *Proceeding of INTERSPEECH*, (Shanghai, China), October 2020.
- [C6] [Baihan Lin](#), “Keep it real: a window to real reality in virtual reality,” in *Proceeding of IJCAI*, (Yokohama, Japan), July 2020.
- [C5] [Baihan Lin](#), G. Cecchi, D. Bouneffouf, J. Reinen, and I. Rish, “A story of two streams: reinforcement learning models from human behavior and neuropsychiatry,” in *Proceeding of AAMAS*, (Auckland, New Zealand), May 2020.
- [C4] [Baihan Lin](#), M. Mur, T. Kietzmann, and N. Kriegeskorte, “Visualizing representational dynamics with multidimensional scaling alignment,” in *Proceeding of CCN*, (Berlin, Germany), September 2019.
- [C3] [Baihan Lin](#), D. Bouneffouf, and G. Cecchi, “Split Q learning: reinforcement learning with two-stream rewards,” in *Proceeding of IJCAI*, (Macao, China), August 2019.
- [C2] [Baihan Lin](#), “Neural networks as model selection with incremental MDL normalization,” in *Proceeding of IJCAI Workshop on Human Brain and Artificial Intelligence (HBAI)*, (Macao, China), August 2019.
- [C1] [Baihan Lin](#), D. Bouneffouf, G. A. Cecchi, and I. Rish, “Contextual bandit with adaptive feature extraction,” in *Proceeding of IEEE ICDM Workshop on Data Science and Big Data Analytics (DSBDA)*, (Singapore), November 2018.

## Peer-Reviewed Extended Abstracts

- [E7] [Baihan Lin](#), D. Bouneffouf, and G. Cecchi, “Unified models of human behavioral agents in bandits, contextual bandits, and RL,” in *KDD Workshop on AI for Good Mental Health (GOOD)*, (San Diego, USA), August 2020.
- [E6] [Baihan Lin](#), D. Bouneffouf, J. Reinen, I. Rish, and G. Cecchi, “Reinforcement learning models of human behavior: reward processing in mental disorders,” in *NeurIPS Workshop on Biological and Artificial Reinforcement Learning (BARL)*, (Vancouver, Canada), December 2019.
- [E5] [Baihan Lin](#), R. Rabadan, and N. Kriegeskorte, “What about higher-order cellular complexity? An inquiry with topological simplicial analysis,” in *NeurIPS Workshop on Learning Meaningful Representations of Life (LMRL)*, (Vancouver, Canada), December 2019.
- [E4] [Baihan Lin](#), “Modeling neurological and psychiatric disorders with reward biased Reinforcement Learning Models,” in *TIPS*, (Boston, USA), October 2019.
- [E3] [Baihan Lin](#), “Cliques of single-cell RNA-seq profiles reveal insights into cell ecology during development and differentiation,” in *ISMB*, (Basel, Switzerland), July 2019.
- [E2] A. Bukkittu, [Baihan Lin](#), T. Vu, and I. Pe’er, “Parkinson’s disease digital biomarker discovery with optimized transitions and inferred Markov emissions,” in *RECOMB Conference on Regulatory & Systems Genomics*, (New York, NY), Nov 2017.
- [E1] [Baihan Lin](#), A. Andelin, and J. Olavarria, “Ocular dominance columns in rat : a qualitative model to analyze deprivation-induced cortical plasticity,” in *NeuroFutures Conference*, (Seattle, WA), June 2016.

## RESEARCH BY TOPICS

since	on	about	published
2019	Speech Processing	speaker diarization, verification, interaction	[P8][C8][C7]
2018	Deep Learning	adaptation, normalization, dynamics, attention	[P11][P4][C4][C2][C1]
2018	Information Theory	model selection, bottleneck, compression	[P11][P4][C2]
2018	Representation Learning	dynamics, topology, neuroimaging, bandit	[C4][C2]
2017	Reinforcement Learning	behavioral model, lifelong learning, multi-agent	[P6][P5][C8][C5][C3][C2][E7][E6][E4]
2017	Contextual Bandits	attention, behavioral modeling	[P6][P5][P8][C8][C7][C1][E7]
2017	Multi-Armed Bandits	embedding selection, internal attention, routing	[P6][P5][C1][E7]
2017	Attention Mechanisms	saliency, routing, model selection, recurrence	[P11][P4][C2][C1]
2017	Online Learning	nonstationary setting, semi-supervision	[P6][P8][C7][C1]
2017	Machine Learning	classification, feature engineering	[P8][C7][C2][C1][E2] etc.
2017	Topological Data Analysis	mapping, simplicial analysis	[P10][E5][E3]
2017	Statistics	independence tests, pattern recognition	[P10]
2017	Computational Psychiatry	wireless device, behavioral modeling, e-Health	[C5][C3][E7][E6][E4][E2]
2017	Computer Vision	virtual/augmented reality, projective geometry	[P7][C6][E1]
2016	Time-Series Analysis	epidemic & behavioral modeling, neural dynamics	[P9][J4][J3][C4][E5][E3]
2014	Vision Neuroscience	ocular dominance, visual illusion, cognitive model	[P7][J6][C4][E1]
2014	Systems Biology	omics, protein design, single-cell genomics	[J5][J3][J2][J1][E3]
2014	Image/Signal Processing	patchiness quantification, gait analysis	[E2][E1]

## TEACHING

2021 Spring	Parsons	<b>PSAM 5020</b>	<b>Machine Learning</b>	Teaching Assistant
2020 Summer	Columbia	<b>PSYC S1610</b>	<b>Statistics for Behavioral Sciences</b>	Teaching Assistant
2014 Fall	UW	<b>PSYCH 202</b>	<b>Neuropsychology</b>	Teaching Assistant

## REFERENCES

Upon requests, early confidential references (from 2017) can be directly delivered via Interfolio from [Dr. David Baker](#) (UW), [Dr. Hong Qian](#) (UW), [Dr. Jaime Olavarria](#) (UW), [Dr. Henry Yang](#) (BGI), [Dr. Chris Vogl](#) (UW) and [Dr. Rachel Chapman](#) (UW).

For more recent references, please feel free to contact my other recent mentors/collaborators such as [Dr. Guillermo Cecchi](#) (IBM Research), [Dr. Irina Rish](#) (Mila, UdeM), [Dr. Shwetak Patel](#) (UW EECS), [Dr. Mar Gonzalez-Franco](#) (Microsoft Research), [Dr. Djallel Bouneffouf](#) (IBM Research) and [Dr. Niko Kriegeskorte](#) (Columbia).

# ACADEMIC EVENTS

## Conference

2020	Australasian Joint Conference on Artificial Intelligence (AJCAI)	presenter	Canberra, Australia
2020	Conference of International Speech Comm. Assoc. (INTERSPEECH)	presenter	Shanghai, China
2020	International Joint Conference on Artificial Intelligence (IJCAI)	presenter	Yokohama, Japan
2020	International Conf. on Knowledge Discovery & Data Mining (KDD)	presenter	San Diego, USA
2020	Autonomous Agents and Multi-Agent Systems (AAMAS)	presenter	Auckland, New Zealand
2019	Neural Information Processing Systems (NeurIPS)	presenter	Vancouver, Canada
2019	Technology in Psychiatry Summit (TIPS)	presenter	Boston, USA
2019	Conference on Cognitive Computational Neuroscience (CCN)	presenter	Berlin, Germany
2019	International Joint Conference on Artificial Intelligence (IJCAI)	presenter	Macao, China
2019	Intelligent Systems for Molecular Biology (ISMB)	presenter	Basel, Switzerland
2018	IEEE International Conference on Data Mining (ICDM)	presenter	Sentosa Island, Singapore
2018	Optimization, Complexity and Invariant Theory (OCIT)	attendee	Princeton, USA
2017	Neural Information Processing Systems (NeurIPS)	attendee	Long Beach, USA
2017	RECOMB Conference on Regulatory & Systems Genomics	presenter	New York, USA
2017	BIC Symposium: NeuroImaging Throughout the LifeSpan	attendee	New York, USA
2017	Genome Engineering 5.0	attendee	Cambridge, USA
2016	RosettaCON	attendee	Leavenworth, USA
2016	NeuroFutures Conference	presenter	Seattle, USA
2015	UW Undergraduate Research Symposium	presenter	Seattle, USA
2014	International Conference on Genomics (ICG)	attendee	Shenzhen, China
2014	NeuroFutures Conference	attendee	Seattle, USA
2013	iGEM World Championship Jamboree	presenter	Cambridge, USA
2013	International Conference on Genomics (ICG)	attendee	Sacramento, USA

## Invited talks

2020	RL Sofa Seminar @ Mila	“Unified Models of Human Behavioral Agents”	Montreal, Canada
2019	RSA 3.0 Seminar @ UWO	“Representational Dynamics & Topology”	Toronto, Canada
2018	Neuro-AI Seminar @ IBM	“Reward-driven Attention and Attention-driven Reward”	New York, USA

## Editorial

2014	<i>Grey Matters</i>	Column editor	Neuroscience magazine in UW	Seattle, USA
2012	<i>Nirvana Weekly</i>	Editorial director	Independent media in SZ	Shenzhen, China

## Engineering

2016	UW WOOF3D	Electronics team	design and build the Big Blue 3D printer	Seattle, USA
2013	iGEM Shenzhen_BGIC_ATCG	Wet team	build a cell-cycle reporter & regulator	Shenzhen, China
2011	SMS-MIT InvenTeam	Hardware team	build a prototype of parking navigator	Shenzhen, China

# LEADERSHIP, SERVICE & OUTREACH

## Reviewer / Program Committee

Journals (2)	PLOS ONE, Advances in Complex Systems
Conferences (27)	CCN, MICCAI, INTERSPEECH, ISMIR, ICLR, AAAI, AISTATS, CVPR
Workshops (9)	NeurIPS BARL & ML4H Workshops

## Volunteer

2014	UW Disability Resources	notetaker	scribe for the disabled	Seattle, USA
2011 - 2013	Shenzhen Children's Hospital	volunteer	rehab for cerebral palsy kids	Shenzhen, China
2007 - 2012	SMS Symphonic Band, SFLS Wind Band	flutist	weekly charity concerts	Shenzhen, China

## Science awareness

2013 - 2015	<u>UW Students for Evidence-Based Medicine &amp; Policy (SEBMAP)</u>	Cofounder / Secretary	Seattle, USA
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## Mental health support

2013 - 2014	UW Residency Hall	Committee Chair	“Help Others Help Ourselves” Initiative	Seattle, USA
2011 - 2013	Shenzhen Doer Union	Founder/President	“Cerebral Palsy Kids’ Spring” Initiative	Shenzhen, China
2011 - 2013	Shenzhen Peer Union	Mental advisor	Peer psychological counseling service	Shenzhen, China

# CLINICAL EXPERIENCE

- Nanjing Brain Hospital** Department of Medical Psychology and Psychiatry Medical Intern  
 2013.12 – 2014.01 | Nanjing, China  
 Supervised by Prof. Na Liu, I made ward round, followed inquiry, psychotherapy, clinical exams and autism studies.
- Dachang Hospital of Nanjing** Department of Pathology Medical Assistant  
 2013.07 | Nanjing, China  
 Supervised by Prof. Guoliang Miao, I performed basic HPV genotyping diagnosis and clinical examination tasks.
- University of Washington** Department of Anthropology Independent Study  
 2011.09 – 2014.06 | Seattle, USA  
 With Prof. Rachel Chapman on structural vicious spiral of China's patient-doctor relationship in healthcare ([pdf](#)).

# SKILLS

## Computational

<b>Languages:</b>	<b>Advanced</b>	<b>Familiarize</b>	<b>Learning</b>
<b>Environments:</b>	MATLAB, Bash, Python, Java	R, C/C++, Perl, Html, CSS, JavaScript	C#, Swift
<b>Software:</b>	Git, Linux, Android, SQL, NOSQL	BOINC, HPC, AWS, CUDA, MPI, OpenMP	Node.js
<b>Bioinformatics:</b>	PyTorch, Adobe Ps/Id/Ai/Ae	ImageJ, Cytoscape, Rosetta	SolidWorks
<b>Mathematics:</b>	sequencing, genomics, databases	alignment, entropy analysis	annotation
	linear algebra, calculus, statistics, probability, scientific computing, ODE, PDE, continuous/discrete modeling, analytical geometry, stochastic dynamics, computational topology, numerical analysis		

## Experimental

<b>Neuroscience:</b>	electrophys, craniotomy, durotomy, microtome, suture, eye enucleation, IV/intracortical injections
<b>Molecular Biol.:</b>	PCR; flow cytometry; staining; culture; electron microscopy; all synthetic biology stuffs...
<b>Biochemistry:</b>	western blotting, circular dichroism spectroscopy, protein expression, SEC-MALS, SDS-PAGE
<b>Organic Chem.:</b>	purification/separation, stereochemistry (GC-MS, TLC, NMR), synthesis & identification, pH meter

# GITHUB CODES

Note: Industry-related and private repositories are not referenced here.

since	at	for	type	language	more	note
2020.08	ePsych @ IBM	HumanLSTM	original	Python	<a href="#">repo</a> <a href="#">arXiv</a>	
2020.04	ePsych @ IBM	★ dilemmaRL	original	Python/Bash	<a href="#">repo</a> <a href="#">arXiv</a>	
2020.01	my own interest	★ V2R: Virtual-to-Real Mirror	original	Python	<a href="#">repo</a> <a href="#">arXiv</a>	IJCAI 2020
2020.01	my own interest	★ MiniVox	original	Matlab	<a href="#">repo</a> <a href="#">arXiv</a> <a href="#">demo</a>	INTERSPEECH 2020
2019.12	my own interest	★ BerlinUCB	original	Matlab	<a href="#">repo</a> <a href="#">arXiv</a>	AJCAI 2020
2019.10	NKLab @ CU	★ PyRSA	group	Python	<a href="#">repo</a> <a href="#">arXiv</a> <a href="#">doc</a>	CCN 2019
2019.02	my own interest	★ UnsupervisedAttentionMechanism	original	Python	<a href="#">repo</a> <a href="#">arXiv</a>	HBAI 2019
2018.09	ePsych @ IBM	★ mentalRL	original	Python/Bash	<a href="#">repo</a> <a href="#">arXiv</a> <a href="#">demo</a>	AAMAS 2020
2018.06	RRLab @ CU	SequenceAttentionClassifier	original	Python/Bash	<a href="#">repo</a> <a href="#">doc</a>	
2018.04	NKLab @ CU	★ AGTIC	original	Matlab	<a href="#">repo</a> <a href="#">arXiv</a>	
2018.04	RRLab @ CU	scTSA	original	Matlab/Java/Bash	<a href="#">repo</a> <a href="#">doc</a>	ISMB 2019
2017.12	ePsych @ IBM	★ ABaCoDE	original	Matlab	<a href="#">repo</a> <a href="#">arXiv</a>	ICDMW 2018
2017.03	UbiComp @ UW	OsteoApp	original	Bash/Python/Matlab	<a href="#">repo</a> <a href="#">doc</a>	
2016.11	HQLab @ UW	RNAi_CME_dynamics	original	Matlab	<a href="#">repo</a> <a href="#">doc</a>	
2016.07	JOLab @ UW	Quanti_Patch	original	Java	<a href="#">repo</a> <a href="#">doc</a>	J. Comp. Neurol.
2016.07	HQLab @ UW	GRN	original	R/Matlab	<a href="#">repo</a>	
2016.07	HQLab @ UW	DNA_dynamics	original	Matlab	<a href="#">repo</a>	
2016.04	DBLab @ UW	self_assembly_scripts	original	Bash/Python/C/Perl	<a href="#">repo</a>	J. Am. Chem. Soc.
2016.04	JOLab @ UW	IntanEphys	original	Matlab	<a href="#">repo</a> <a href="#">doc</a>	
2016.04	my own interest	doerbeta.github.io	original	Html/CSS/JavaScript	<a href="#">repo</a> <a href="#">demo</a>	
2016.04	YTLab @ BIME	Ebola_GUI_SL	original	Matlab/R	<a href="#">repo</a>	
2016.03	my own interest	Ebola_bat_model	original	Matlab	<a href="#">repo</a> <a href="#">doc</a>	
2016.03	WOOF3D @ UW	Big_Blue_3DPrinter	modify	C	<a href="#">repo</a> <a href="#">doc</a>	
2015.12	DBLab @ UW	bc_wc2dm	original	Java	<a href="#">repo</a>	
2015.11	DBLab @ UW	bp_solver	original	Java	<a href="#">repo</a>	
2015.11	DBLab @ UW	bp_creator	original	Java	<a href="#">repo</a>	
2015.10	DBLab @ UW	ABEGO_solver	original	Java/Perl	<a href="#">repo</a>	
2014.08	YTLab @ BIME	Matrix_solver	original	Java	<a href="#">repo</a>	
2014.06	JOLab @ UW	★ Patch_Processor_2.0	original	Java	<a href="#">repo</a> <a href="#">doc</a> <a href="#">demo</a>	NeuroFutures 2016
2014.02	CompNeuro @ UW	Neuronal_RC_HH_model	original	Matlab	<a href="#">repo</a> <a href="#">doc</a>	
2014.01	CompNeuro @ UW	Neuron_tuning_curve	original	Matlab	<a href="#">repo</a> <a href="#">doc</a>	
2013.09	HHAL @ BGI	Autism_Genomics_QC_adapter	modify	Perl	<a href="#">repo</a>	
2013.08	HHAL @ BGI	Autism_Genomics_QC_NACTG_stat	original	Perl	<a href="#">repo</a>	