Brendan Chambers PhD brendanchambers@uchicago.edu

Creative data researcher, previously a scholar of computational neuroscience, verbal & visual communicator

SELECTED PROJECTS

Discovered voting cliques using **web-scraping** and Chicago city council data 2018

Character-level text generation with **RNNs** built using Keras 2018

Investigated racialized sentiment by **clustering** streaming Twitter statuses 2017

High-dimensional parameter-tuning for models, using **stochastic swarm searches** 2017

Inferred candidate **causal links** within noisy recordings of neural communication 2014

Evolutionary algorithm solvers for alphabetic substitution cyphers and TSP 2010

RESEARCH HISTORY

Postdoctoral Fellow MacLean/Palmer Lab, University of Chicago 2017

- Transferred strategies from machine learning to build better neural activity-mapping & simulation tools

Doctoral Candidate MacLean Lab, University of Chicago 2013

- Helped advance the study of biological computation using data and simulations
- Supervised & mentored two undergraduates, now placed into research jobs
- Revealed wiring & emergent dynamics in a complex communication network

Doctoral Student MacLean Lab, University of Chicago 2011

- Refined custom signal acquisition pipeline and developed quality tests for data

Honors Student Department of Computer Science, Oberlin College 2010

- Developed attention-steered deep RBM for analyzing distorted words

Summer Intern Rockwell Collins Engineering 2009

- Supported virtual sensing project

AWARDS

- 50 Most-Downloaded Articles, PLOS Computational Biology 2017
- University of Chicago Laura Thorne Donnelley Fellow 2017
- Hot Topics Nominee, Society for Neuroscience 2016
- NSF IGERT Fellow for Integrative Training in Neural Control 2012
- NSF S-STEM Scholar for Computation and Modeling 2011

HIGHLIGHTED PUBLICATION

Higher-order synaptic interactions coordinate dynamics in recurrent networks
Chambers & MacLean PLOS Computational Biology 2016

SKILLS

Python | Matlab | Java | JS / ES6 | Github | Jupyter Notebooks | Adobe Illustrator | D3.js