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| Interests | Cognitive Control ♦ Learning & Memory ♦ Neurodynamics ♦ Oscillations ♦ Signal Processing ♦ Emergent Modeling ♦ Machine Learning ♦ Data Visualization | | |
| Preferred Skills | MATLAB, Python C++, VTK HTML, CSS Netlogo, Lisp | PCA, Neural Networks Regression models, GLMs Nonparametric statistics Bayesian models, HMMs | Fieldtrip, EEGLab, Freesurfer Arduino/PI,CAD FPGA Programming, VHDL Git, Bash, Parallel Computing |
| Education | Bachelor of Engineering from Northwestern University McCormick School of Engineering and Applied Sciences September 2012 - June 2016 Computer Science Major: Machine Learning and VLSI Neuroscience Major: Computation and Systems Modelling Integrated Science Program Major: Quantitative Bio concentration | | |
| Research | Working memory gating in human intracraial recordings <i>Research Assistant, Programmer</i> <i>Badre Lab, Brown University</i> July 2016 - Present <ul style="list-style-type: none"> Reconstruction of MR, CT, and electrode placements in native and canonical spaces Preprocessing for artifact rejection, ECoG/SEEG rereferencing, and epileptic tissue recognition Signal processing for ERP,time-frequency, and interregional coupling measures Feature processing for decoding, statistical analysis, and connectivity models Oscillatory dynamics of memory retrieval in pharmacoligcal states <i>Research Assistant, Programmer</i> <i>Radulovic Lab, Feinberg School of Medicine</i> April 2014 - October 2015 <ul style="list-style-type: none"> Developed LFP Analysis Pipeline Performed electrophysiological recording fear conditioning experiments Performed electrode implantation surgery in mice Experimental design and analysis Relevancy models in visual search <i>Research Assistant, Programmer</i> <i>Segraves Lab, Northwestern University</i> December 2012 - April 2014 <ul style="list-style-type: none"> Primate care and handling Development of bottom up object recognition model LFP analysis and spike sorting Experimental design and analysis | | |
| Publications and Posters | Corcoran K, Frick BJ, Kay LM, Radulovic J. <i>Coherent activity between retrosplenial cortex, hippocampus, thalamus, and anterior cingulate cortex during retrieval of recent and remote context fear memory.</i> Neurobio of Learning and Memory. 2016 Corcoran K, Frick BJ, Kay LM, Radulovic J. <i>Altered states: amnesic treatments alter coherent activity between retrosplenial cortex and associated structures during memory retrieval.</i> SFN Poster Presentation. 2015. Glaser JI, Lawlor PN, Wood DK, Ramkumar P, Caddigan S, Drapekin J, Frick B, Qin B, Kording KP, Segraves MA. <i>The frontal eye field reflects task demands in natural scenes.</i> SFN Poster Presentation. 2014. | | |
| Honors and Awards | McCormick Summer Research Award Summer 2015 ISP Summer Research Grant Summer 2014 UG Research Assistant Program Summer 2013 | | |