

BRIAN KIM

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EDUCATION

Drexel University, College of Arts and Sciences, Philadelphia, PA Exp Jun 2027
Ph.D. in Applied Cognitive and Brain Sciences

Drexel University, College of Arts and Sciences, Philadelphia, PA Jun 2022
M.S. in Psychology

Columbia University, School of Engineering and Applied Sciences, New York, NY Sep 2012 - May 2016
B.S. in Computer Science

RESEARCH EXPERIENCE

Cognitive Neuroengineering & Wellbeing Lab, Drexel University, Philadelphia, PA Jun 2020 – Present
Graduate Student Researcher

- Examining the effects of cognitive domain on EEG phase prediction accuracy using publicly available datasets
- Performed statistical modeling, machine learning, and network analysis on structural connectivity matrices to explain behavioral variance based on remaining anatomical bypasses

Quantitative Psychology and Statistics Lab, Drexel University, Philadelphia, PA Jun 2020 – Present
Graduate Student Researcher

- Examining the effects of functional connectivity and topological differences on adolescent social phobia with and without ADHD comorbidity using graph theory and machine learning methods

Motivation Lab, New York University, New York, NY Sep 2019 – Jun 2020
Research Assistant

- Assisted in data collection to determine the effects of explicitly categorizing one's obstacles in goal attainment
- Refactored a public outreach website and developed a web application to implement a guided session of Mental Contrasting with Implementation Intentions (MCII)

Intrusion Detection Systems Lab, Columbia University, New York, NY Dec 2012 – May 2015
Research Assistant

- Developed a security metric by modifying online exploits and testing them against several security products
- Established a framework to test the viability of replaying the packets of drive-by downloads
- Examined the vulnerability of embedded network devices by hacking into scanners and printers

PROFESSIONAL EXPERIENCE

Within, Long Island City, NY Jul 2018 – Jun 2019
Full Stack Developer

- Implemented User Creation and Authentication for the company's web application
- Developed tools to generate ads from different creatives (images, videos) and apply machine learning techniques for automatic tag creation
- Created company-wide text alerts to inform of anomalous ad spending behavior

Department of Homeland Security, Washington D.C. May 2015 – Aug 2015
Cyber Security Intern

- Identified and addressed security vulnerabilities in DHS operating systems, while installing software and protocols to be FISMA compliant
- Shadowed members of the Vulnerability Assessment Team during incident response and software setup

Olympiad Academia, New York, NY Sep 2011 – Dec 2022
Teaching Position

- Taught high school students a variety of subjects: computer science, physics, and calculus

AWARDS

Drexel University Dean's Fellowship 2020-2021

Columbia University's Egleston Scholar 2012-2016

PUBLISHED MANUSCRIPTS

1. **Kim, B.**, Niu, X., & Zhang, F. (2023). Functional connectivity strength and topology differences in social phobia adolescents with and without ADHD comorbidity. *Neuropsychologia*, 178, 108418. <https://doi.org/10.1016/j.neuropsychologia.2022.108418>
2. Erickson, B. A., **Kim, B.**, Deck, B. L., Pustina, D., DeMarco, A. T., Dickens, J. V., Kelkar, A. S., Turkeltaub, P. E., & Medaglia, J. D. (2022). Preserved anatomical bypasses predict variance in language functions after stroke. *Cortex*. <https://doi.org/10.1016/j.cortex.2022.05.023>
3. Ismailescu, D., & **Kim, B.** (2014). Packing and Covering with Centrally Symmetric Convex Disks. *Discrete & Computational Geometry*, 51(2), 495–508. <https://doi.org/10.1007/s00454-013-9562-5>

MANUSCRIPTS IN REVIEW AND PREPARATION

1. **Kim, B.**, Fernandez-Nunez, G., Erickson, B.A., Medaglia, J.D. (In preparation). The effects of rest and task on EEG Phase Prediction Accuracy.

CONFERENCE POSTERS

1. **Kim, B.**, Fernandez-Nunez, G., Erickson, B.A., Vitale, F., Medaglia, J.D. (2022, Jul). The Effect of Rest and Task States on EEG Phase Prediction Accuracy. Poster presented at the Joint Meeting of Neuroergonomics Conference & NYC Neuromodulation Conference in the City College of New York, NY.
2. **Kim, B.**, Fernandez- Nunez, G., Erickson, B.A., Vitale, F., Medaglia, J.D. (2022, Apr). The Effect of Rest and Task States on EEG Phase Prediction Accuracy. Poster presented at the Mahoney Institute for Neuroscience (MINS) Annual Symposium in University of Pennsylvania, PA.
3. **Kim, B.**, Niu, X., Zhang F. (2021, Jun). Disrupted Functional Connectivity in Adolescent Social Phobia with and without ADHD Comorbidity. Poster presented virtually at the annual meeting of the Organization for Human Brain Mapping.
4. **Kim, B.**, Erickson, B.A., Driscoll, N., Vitale, F., Medaglia, J.D. (2021, Apr). Consistency of EEG Phase Detection Across Task Stages and Training Sets. Poster presented at the Drexel Emerging Graduate Scholars Conference.

SKILLS

Programming: Java, Python, C/C++, Ruby, R, Matlab, Bash, HTML, CSS, Javascript, Typescript, ReactJS, SQL