Ashley V Greene

Education

Prairie View A&M University, Prairie View, TX 2024–present
Ph.D. Bioinformatics

University of Illinois at Chicago, Chicago, IL
M.S. Neural Engineering

Arizona State University, Tempe, AZ
B.S.E. Bioengineering

Relevant Work Experience

8/24–present **Predoctoral Trainee,** National Institutes of Health Advanced Training in Artificial Intelligence for Precision Nutrition Science Research (AIPrN) T32 Training Program. Duties include gaining knowledge and skills regarding precision nutrition and the bioinformatics tools required for analysis, including microbiomics/metabolomics

4/22–5/24 **Proofreader/Editor,** American Institute of Mathematical Sciences. Duties include proofreading/editing STEM-related journal articles

11/16–present **Freelance Science and Engineering Content Editor,** Cactus Communications. Duties include editing and peer-reviewing international clients' graduate student theses, dissertations, English conference papers, and journal articles

3/13–9/13 **Freelance Editor,** Editing Korean graduate student theses, dissertations, English conference papers, and journal articles

1/13–12/15 **Freelance Korean to English Translator**

12/12–12/15 **Bilingual English as a Second Language Instructor,** South Korea. Duties include bilingual teaching of English to Korean students varying from young children to adults; languages: Korean and English

1/11–5/11 **Teaching Assistant,** University of Illinois at Chicago, Morgan Street, Chicago, IL. Duties include instructing physics labs and grading

1/09–8/10 **Research Assistant**, University of Illinois at Chicago, Morgan Street, Chicago, IL. Duties include conducting graduate research on the analysis of synchronized single-neuron recordings from the primary motor cortex of rat model and corresponding kinematic data resulting from trained, tracked upper limb movement to clarify the effects of robot rehabilitation following stroke induction

8/07-12/08 **Teaching Assistant,** University of Illinois at Chicago, Morgan Street, Chicago, IL. Duties include grading homework and exams, and assisting students with questions

Relevant Skills and Knowledge

Scientific journal editing
MATLAB – custom designed programming to synchronize and analyze neural and kinematic data
Python
Microsoft Office Suite
Brain-machine interfaces
C++ programming
Machine learning
Artificial neural networks (RNNs, CNNs)
Unix/Linux Operating System
AutoCAD design
Grant/Funding proposal writing
Research journal article editing

Neural signal processing
Design and fabrication of micro-wire electrode allowing for successful later chronic and acute photothrombosis
Handling/behavioral training of rats
Haptics
Spike sorting using PCA and k-means clustering methods
Statistical analysis
Electrophysiology
Neurophysiology
M1 implantation and photothrombosis surgery in rats
Strong understanding of neuroplasticity and neural variability in the motor cortex
Management of several undergraduate assistants

Master's Thesis

Title: Neuroplastic changes as measured by a parameter-controlled brain-machine interface using a rat model

Aim: To design, develop, and utilize a brain-machine interface that can quantify neuroplasticity of the forelimb area of rat motor cortex pre- and post-stroke in relation to motor function capability

Language Skills

Korean language fluency
Beginner-Intermediate level of Japanese

Publications

Abstracts

"Simultaneous Neural Feedback From the Motor Cortex and Spatial Forelimb Information During Robot Rehabilitation Using a Rat" Ashley V Greene, Patrick J. Rousche, Milan Ramaiya and James Patton. Proceedings of the Biomedical Engineering Society Annual Meeting, Oct. 2009.

"A System for Simultaneous Neural Recording and Spatial Forelimb Tracking During Robot Rehabilitation" Ashley V Greene, Patrick J. Rousche, Milan Ramaiya and James Patton. Proceedings of the Society for Neuroscience Annual Meeting, Oct. 2009.