

Research Interests

Machine learning for solving neural engineering problems, mechanisms of neural activity in natural human behaviours.

Education

University of Washington, Seattle WA – PhD Candidate, 2019-Present

Virginia Commonwealth University, Richmond VA – Bachelor of Science in Computer Science, 2019

Technical Skills

Languages – Python, Java, R, Perl, C, SAS, Unix, MATLAB

Tools – Tensorflow, Keras, Android developer, GitHub, LaTeX, PyTorch

Research Experience

Paul G. Allen School First-Year Ph.D. Fellow, University of Washington – 2019-Present

Researching neural state decoding and semi-supervised machine learning, analysing naturalistic neural recordings of speech production and spontaneous human behaviors.

Undergraduate Research Assistant, VCU, Department of Computer Science – 2016-2019

Conducted research on building tools for genomics-based classification problems and pattern recognition through deep neural networks.

Science Education Alliance (SEA) – 2015

<https://www.hhmi.org/science-education/programs/science-education-alliance>

<https://www.ncbi.nlm.nih.gov/genbank/>

Participant in Phage Hunters Advancing Genomics and Evolutionary Science. Isolated novel bacteriophage from soil samples. Annotated genomes for submission to GenBank.

Research Assistant, University of Virginia, Computer Science Department – 2014-2017

Conducted hours of investigative research on large intellectual property and patent litigations, and consults in regards to problem solving and organization.

Teaching and Outreach

[NeuroMatch Academy](#) Course Developer (NMA-CD).

Developed course materials for [Week 2 Day 2](#) “Linear dynamical systems”. Contributed to the design and creation of NMA teaching materials with tutorial design and Python implementation.

Student Led Seminar Committee for UW Computational Neuroscience Center (UW-CNC).

Started neural engineering seminar series featuring junior faculty and post-docs. Speakers are selected by undergraduate and graduate students.

Digital Media Coordinator for the [Student Leadership Council](#) at the [Center for Neurotechnology \(CNT\)](#).

Content writing and social media engagement to promote scientific research opportunities to high school and undergraduate students.

Publications

Flounlacker, F., Johnson, A., Marquez, D., and Miller, R, on behalf of the 2015-2016 VCU Phage Hunters*, **Complete genome sequences of Bacillus phages DirtyBetty and Kida, Genome Announcement**

Posters

[Dean's Undergraduate Research Symposium](#), 2018

[Phage Lab Infographic](#), 2016

Awards

Paul G. Allen School Dean's First-Year Ph.D. Fellowship, 2019

[Winner of the Dean's Undergraduate Research Symposium](#), 2nd place, VCU, 2018

Dean's Undergraduate Research Initiative (DURI) Fellow, VCU, 2018

Goldwater Scholarship Honourable Mention, 2017

Phi Kappa Phi – Life Sciences Undergraduate Scholarship, 2017

Dean's List, Virginia Commonwealth University, 2014 – 2019

Academic Achievement Award NB, Virginia Commonwealth University, 2015 – 2019

Mentored Students

Zeynep Toprakhasti, Undergraduate in UW Computer Science and Engineering, 2020 – Present