ETHAN YOUNG

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EDUCATION

University of California, Los Angeles *Senior, Anticipated Graduation 2023*
B.S. Data Theory

RESEARCH EXPERIENCES

Shallow vs. Deep Brain Network Models for Mental Disorder Analysis May 2022 - July 2022
Advisor: Carl Yang *Emory University*

· Worked in a team at the Emory REU/RET computational mathematics for data sciences.
· Benchmarked the performance of graph kernel methods and graph neural networks on brain network data constructed from fMRI scans.
· Published a manuscript, gave a talk, and presented a poster on the project.

Dynamical Importance and Network Peturbations April 2022 - Present
Advisor: Mason Porter *UCLA*

· Derived an improved approximation of dynamical importance using the power method and Rayleigh quotients.
· Studying edge removals on the synchronization of the Kuramoto model on different network structures.

Symbolic Regression using Genetic Programming April 2022 - Present
PARISlab *UCLA*

· Working in the machine learning subgroup under Yu Song and Mathieu Bauchy at PARISlab (Physics of AmoRphous and Inorganic Solids Lab).
· Modeling the viscosity of glass silicates with the *GPTIPS* and *gplearn* packages.

PUBLICATIONS

Conferences

Comparing Shallow and Deep Graph Models for Brain Network Analysis. IEEE Big Data 2022 BrainNN Workshop. Erica Choi, Sally Smith, **Ethan Young**.

TALKS

Conferences

IEEE Big Data 2022. The First International Workshop on Neural Network Models for Brain Connectome Analysis (BrainNN). Osaka, Japan.