

MICHAEL WILSON

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EDUCATION

Ph.D. in Statistics

August 2019 - Present

Florida State University - GPA: 3.72

B.A. in Applied Mathematics, Minors in Applied Statistics and Computer Science

August 2014 - May 2019

Humboldt State University - GPA 3.46

CURRENT RESEARCH

Statistical Analysis of Shape Distributions, with applications to DTMRI

October 2021 - Present

Ph.D. Advisor: Dr. Anuj Srivastava, Florida State University

- Using data from the Grady Trauma Project, we are using elastic function data analysis for feature extraction, density estimation and classification of disease status based on DTMRI imaging of white matter fiber tracts.

Elastic Functional Optimal Transport

June 2022 - Present

Ph.D. Advisor: Dr. Anuj Srivastava, Florida State University

- This research direction seeks to integrate the Elastic Functional Data Analysis framework with Functional Optimal Transport, which would allow for optimal transport according to a shape invariant metric.

RESEARCH EXPERIENCE

Pharmacokinetic Modelling of ^{18}F FDG Uptake in PET imaging of Atherosclerosis

June 2019 - August 2019

Summer Internship - National Institutes of Health, Clinical Center, Department of Nuclear Medicine

- Wrote scripts in R to implement a 3-compartment pharmacokinetic model of ^{18}F FDG uptake to make predictions of changes in inflammation between scans, and began adapting the model for full spatial simulation of uptake along the aorta.

Mapping the Switch from GABA Excitation to Inhibition in Zebrafish Larvae

June 2018 - December 2018

Psychology Research Project - Gahtan Lab

- Wrote scripts in Matlab to convert calcium imaging recordings of neural activity in larval zebrafish into data about levels of activity in 4 brain regions. Abstract was accepted for a poster presentation at the Society for Neuroscience 2018 conference.

WORK EXPERIENCE

Graduate Teaching Assistant, Graduate Research Assistant

August 2019 - Present

Department of Statistics, Florida State University

SKILLS

Programming Languages: Python, Matlab, R, SQL