# Amelia H. Tran

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# **EDUCATION**

University of Pennsylvania

Philadelphia, PA M.S. in Biostatistics Expected 2023

**Mount Holyoke College** 

South Hadley, MA B.A. in Statistics, Data Science, Summa Cum Laude May 2021

#### RESEARCH EXPERIENCE

# University of Pennsylvania Graduate Research Assistant

Philadelphia, PA

Sept 2021 -

Supervisor: Dr. Douglas Schaubel, Department of Biostatistics and Epidemiology

- Peruse literature in recent developments of novel statistical methodologies for time-to-event and longitudinal data in end-stage kidney and liver disease related studies
- Perform data cleaning, data description, and formal statistical analysis to predict delayed graft function (DGF) and time to graft failure in kidney transplantation for different transplant centers

# Institute for Pure and Applied Mathematics, UCLA Applied Maths Research Fellow

Los Angeles, CA

June 2021 – Aug 2021

Supervisors: Drs. Laurent White (AMD Research) and Kyung Ha (UCLA)

- Worked for Advanced Micro Devices to develop physics-informed neural networks models in Python using Keras and TensorFlow to simulate the wave equation efficiently
- Designed an optimal network architecture by embedding physics constraints into objective function, varying network parameters, and sampling unlabeled data points to enhance extrapolation

### **Mount Holyoke College**

South Hadley, MA

Undergraduate Research Assistant

Aug 2020 – May 2021

Supervisor: Dr. Marie Ozanne, Department of Mathematics and Statistics

- Conducted literature review and incorporated the cirrhosis project into an honors thesis
- Modeled the progression of neglected tropical disease Canine Visceral Leishmaniasis
- Investigated the effects of lamb massage with Wilcoxon's nonparametric tests

Supervisor: Dr. Evan Ray, Department of Mathematics and Statistics

June 2019 – May 2020

- Contributed to the *ncopula* package in R to calculate the cumulative distribution function, probability density function, log-likelihood to develop hierarchical Archimedean copulas
- Carried out unit tests to examine the package functionality and provided reproducible documentation

### Memorial Sloan Kettering Cancer Center

New York City, NY

Quantitative Sciences Undergraduate Research Fellow

June 2020 – Aug 2020

Supervisor: Dr. Audrey Mauguen, Department of Epidemiology and Biostatistics

- Evaluated association between biomarker bilirubin and survival in liver cirrhosis with different approaches for censored data, i.e. Cox Proportional Hazards, Time-Dependent Cox and Joint Model
- Implemented algorithms in R to extract time interval endpoints and perform missing data imputation

#### TECHNICAL SKILLS

Statistical Software: R, Stata, SAS, SPSS

Programming: Python, Java, SQL