# JONATHAN HUML

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#### **EDUCATION**

## University of North Carolina-Chapel Hill

2020

Mathematics (B.A.), Statistics (B.S.), GPA: 3.7

#### Harvard University

Fall 2021 - May 2023

Computational Science and Engineering (M.E.), GPA: 4.0

#### **EXPERIENCE**

## Computation, Representation, and Inference in Signal Processing Group 2021-present

Research Assistant. Manifold learning algorithms for compressive sensing and sparse coding problems

## Drug Information Association Adaptive Design Scientific Working Group

2021

Formulated a more rigorous statistical basis for regulatory guidance on adaptive trial designs, culminating in a book chapter published in December 2021

### **IQVIA Data Science Intern**

2019

Built a text analysis program for quality reports using deep learning (CNNs, RNNs) with Keras. Performed modeling and statistical sampling for the Quality Assurance department.

Grant Lab @ NCSU 2019 - 2020

Extended my work at the UNC Makerspace on autonomous wheelchairs; Swift, iOS development with Python/MQTT and microcomputer programming with Raspberry Pi

## **UNC Makerspace and Machine Shop**

2017 - 2019

Budgeted, managed a project to build a high performance, low-cost wheelchair with Arduino, C++; implemented computer vision algorithms

## SKILLS AND PERSONAL DEVELOPMENT

Data science: Advanced in Python (Keras, Tensorflow, Scikit-Learn) and R

Web development: HTML, CSS, Django framework

Spark, Excel, MySQL, SQL

Eagle Scout (youngest in Troop 424 history)

Private pilot license, light-sport aircraft training (70+ hours)

### **PUBLICATIONS**

- 1. "Use of Big Data to Aid Patient Recruitment for Clinical Trials Involving Biosimilars and Rare Diseases." (DOI: 10.1007/s43441-019-00009-1)
- 2. "Accelerating Rare Disease Drug Development: Lessons Learned from Muscular Dystrophy Patient Advocacy Groups." (DOI: 10.1007/s43441-020-00221-4)
- 3. "Patient Benefits from Innovative Designs in Rare Diseases." Rare Disease Drug Development. Springer. 2021.