JONATHAN HUML

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EDUCATION

University of North Carolina-Chapel Hill 2020

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

Thesis: Nonparametric Markowitz Optimization

Harvard University 2021 - 2023

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

Thesis (working title): Geometric Sparse Coding with Block-Sparse Laplacian Regularization

Awarded IACS Student Scholarship (2022-2023) for Top Thesis Proposal

RESEARCH 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 2020-2021

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 that was published in 2020

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

Eagle Scout (youngest in Troop 424 history)
Languages: `Python`, `Matlab`
Web development: `HTML/CSS`, Django framework
Spark, Excel, MySQL, SQL

PUBLICATIONS

1. Z. Antonijevic, RA Beckman, **JR Huml**, Y. Liu, C. Mayer, G. McMillan, RS Tang. "Patient Benefits from Innovative Designs in Rare Diseases." *Rare Disease Drug Development*. Springer. 2021.
2. RA Huml, J. Dawson, M. Bailey, N. Nakas, J. Williams, M. Kolochavina, **JR Huml**. "Accelerating Rare Disease Drug Development: Lessons Learned from Muscular Dystrophy Patient Advocacy Groups." *Therapeutic Innovation & Regulatory Science*. 2021.
3. RA Huml, J. Dawson, K. Lipworth, L. Rojas, EJ Warren, C. Manaktala, **JR Huml**. "Use of Big Data to Aid Patient Recruitment for Clinical Trials Involving Biosimilars and Rare Diseases." *Therapeutic Innovation & Regulatory Science*. 2020.