

# IAN ARRIAGA-MACKENZIE

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[iansam.com](http://iansam.com)

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Software development | Applied Statistics | Machine Learning

## SKILLS

R, Bash, Python, Linux, Matlab, SAS, Git, Linux, Julia, C++, PLINK, bedtools, Samtools, VCFtools, ADMIXTURE, Galaxy, Ingenuity Pathway Analysis, PennCNV

Optimization, Mixture Models, Algorithm Design, Genetics

Jupyter, Cluster Computing, Containerization, Docker, Open-Source Software

## EXPERIENCE

### **Center for Innovative Design & Analysis** Research Assistant

**AUG 2021 - PRESENT | DENVER, CO**

- Assessed gene-level factors impacting acetaminophen use and liver damage.
- Developed pipeline for Copy Number Variant analysis within genomic data.

### **Hendricks Research Group - CU Denver** Research Assistant

**MAY 2019 - AUG 2021 | DENVER, CO**

- Published novel method of population-level ancestry estimation with summary genetic data.
- Developed and implemented minimization/maximization algorithms.
- Deployed interactive Shiny web-apps to display research results.
- Genome wide association study of birth height in a Guatemalan cohort.

### **University of Colorado Denver** Consulting Volunteer

**AUG 2019 - DEC 2019 | DENVER, CO**

- Assessed the impact of marijuana on sleep using electroencephalogram (EEG) data.
- Built signal decomposition framework using Fast Fourier Transforms.

## EDUCATION

### **MS - Statistics** University of Colorado Denver

**AUG 2021**

### **BS - Mathematics** University of Colorado Denver

**MAY 2020**

## AWARDS

C.W. Cotterman Award - American Journal of Human Genetics - 2021

CLAS Outstanding MS Graduate - University of Colorado Denver - 2021