

# IAN ARRIAGA-MACKENZIE

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

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Applied Statistics • Software Development • Machine Learning

## SKILLS

R, Bash, Python, Linux, Matlab, SAS, git, 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

Toxicology impacts of common medicine.

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

### Hendricks Research - CU Denver Research Assistant

MAY 2019 - AUG 2021 | DENVER, CO

Research equity in underrepresented groups.

- 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 Consultant

AUG 2019 - DEC 2019 | DENVER, CO

Marijuana sleep study analysis.

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

## EDUCATION

### Master of Science - Statistics University of Colorado Denver

AUG 2021

C.W. Cotterman Award (2021) – CLAS Outstanding MS Graduate (2021)

### Bachelor of Science - Mathematics University of Colorado Denver

MAY 2020

Undergraduate Research Opportunity Program Grant (2019/2020)