IAN ARRIAGA-MACKENZIE  
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**iansam.com**

**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)