

Jackson Balch

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EDUCATION

University of Minnesota, Twin Cities

Minneapolis, MN

College of Liberal Arts

May 2024

Bachelor of Science in Statistical Sciences, Minor in Computer Sciences

GPA: 3.831 / 4.00

Honors/Awards: Honors Program, Dean's List 2021-24

Relevant Coursework:

Statistical Computing • Software Development • Discrete Structures and Algorithms • Nonparametric Methods • Linear Algebra • Differential Equations • Statistical Machine Learning • Theory of Statistics • Statistical Consultation

EXPERIENCE

Institute of Social Research and Data Innovation

Minneapolis, MN

Data Engineer Intern/Developer I

January 2023 - Present

- Developed multiple efficient file-parsing algorithms to transform data structures for JSON, XML, CSV, XLSX
- Built custom SQLAlchemy ORM Application to facilitate database interaction for researchers
- Utilized Python and Rust programming languages to create command-line utility tools
- Updated and maintained open-source data-linking machine learning package
- Expanded existing database reporting infrastructure through SQL-based command-line application
- Worked with fixed-width and parquet census and survey data files through Rust-based programming library
- Led and roadmapped long standing script emporium revamp project with over six contributors
- Worked as member of diverse team with goal of making high-quality data freely available for research

Red River Technology

Claremont, NH

Sales Operations Intern / DOD ISAM

June 2022 - August 2022

- Built over 175 quotes for the US Department of Defense and Federal Aviation Agency
- Employed proprietary CRM software and Tableau to build quotes and maximize efficiency
- Created over \$55,000 in margin for the company

LEADERSHIP & ACTIVITIES

UMN Sports Analytics Club

Minneapolis, MN

Vice President, Team Lead

December 2021 - Present

- Developed eight (+) major machine learning and data visualization projects utilizing R and Python
- Presented findings at five international conferences
- SMT Data Challenge Winner

SKILLS

Languages: Fluent in English; Intermediate Proficiency in Spanish

Programming: Python • R • Rust • SQL • Git/VCS • Excel • Java • Tableau • Perl • JavaScript • Linux • Microsoft Office • Google Suite

Statistics: Linear Modeling • Logistic Regression • Supervised and Unsupervised Machine Learning • Nonparametric Methodology Monte-Carlo Simulation • Bootstrapping • Bayesian Inference • Parallel Computing • Graph Theory • Network Analysis

PROJECTS AND POSTER SESSIONS

Posters and Presentation Sessions:

2022 UCONN Sports Analytics Symposium • Cassis Symposium on Statistics in Sports • Ohio State Sports Analytics Conference • MinneMUDAC 2023 Finalist • Carnegie Mellon Sports Analytics Conference

Top Projects:

Evaluating Player Relationships in Stolen Base Defense

Applications of Tracking Data in the Evaluation of Baserunner Performance

Spatiotemporal clustering model for NFL Wide Receiver Route Identification