Joseph Rissman

Data Scientist

jirissman@gmail.com | *linkedin.com/in/joseph-rissman*
https://github.com/jirissman | *josephrissman.com*
Cotuit, MA, 02635, United States | *4806209671*

Data Scientist with a strong background in biotechnology and a Master of Science in Computer Science. Experienced in process automation and data analysis, skilled in Python, SQL, and machine learning tools. Aiming to leverage expertise in data-driven decision-making to enhance analytical capabilities.

Education

Boston University

Sep 2023 - May 2025

Master of Science Computer Science

Minor: Data Analytics

Relevant Coursework: Advanced Machine Learning and Neural Networks, Database Management, Data Mining, Web Mining and Graph Analytics

GPA: 4.0

Northeastern University

Sep 2013 - May 2018

Bachelor of Science Biochemistry

Minor: Mathematics

Relevant Coursework: Linear Algebra, Differential Equations, Statistics, Number Theory

GPA: 3.7

Projects

GradAid

Jan 2025 - May 2025

Lead developer for GradAid, an AI-powered web application assisting international students with graduate school applications. It uses custom prompts for personalized document generation and features a searchable program database created from web-scraped, cleaned, and enriched data.

- Managed project scope and timelines, employing agile methodologies to deliver functional increments and maintain consistent progress.
- Led the transition to a new architectural pattern, spearheading the adoption of Convex, Clerk, React, Vite, Netlify, Shaden, and Tailwind CSS to enhance development efficiency.
- Designed and implemented a modular application architecture, promoting component reusability and maintainability across frontend and backend.

Work Experience

Associate Scientist

Nov 2019 - Jan 2025

Intellia Therapeutics | *Cambridge, MA*

Evaluated therapeutic candidates in preclinical models by identifying and investigating off-target genome editing events to ensure the safety and efficacy of potential treatments for patients.

- Managed a junior scientist to successfully prepare over 100 samples per month for NGS sequencing, resulting in a 25% increase in sequencing throughput.
- Implemented high-throughput sample and library preparation using automation, achieving a 60% reduction in hands-on time and an increase in data quality.
- Performed NGS data analysis using database pipeline tools and LIMS, ensuring reproducibility across more than 20 sequencing runs per year.
- Supported the automation team in optimizing and validating high-throughput NGS library preparation methods to attain a 20% increase in lab efficiency and a 15% decrease in costs.
- Evaluated five methods for sequencing potential CRISPR off-target sites. Applied data science techniques to select and implemented the most cost-effective and sensitive method, resulting in a 50% reduction in the cost of off-target library preparation.
- Developed and validated novel NGS methods for structural variation analysis, achieving 90% sensitivity and specificity for detecting complex rearrangements.

Research Technician

Jul 2018 - May 2019

Massachusetts General Hospital | *Boston, MA*

Engineered innovative CRISPR proteins by applying principles of robust experimental design. Collected and analyzed large-scale genomic data to measure editing efficiency and specificity, translating complex experimental results into actionable insights for iterative protein optimization and development.

- Analyzed NGS and Sanger sequencing data to evaluate genome editing efficiency in human cells.
- Designed and executed bacterial cloning experiments for novel genome editing tool development, creating five hundred new constructs.

Research Assistant

Jul 2017 - Dec 2017

Moderna | *Cambridge, MA*

Leveraged AWS cloud computing and Unix environments to process and model complex RNA sequencing data for mRNA secondary structure prediction. My analysis provided critical data-driven insights that directly informed the design and optimization of mRNA-based therapeutics.

- Analyzed FASTQ data using Python scripting and command-line tools within an AWS-based Unix environment.
- Conducted RNA-Seq experiments for structural analysis of clinically relevant mRNA therapeutics in cell-like conditions.

Core Skills

Programming Tools: Python, R, SQL, C++, Java, AWS, Git/GitHub, CI/CD, Docker, Kubernetes

Data Analysis: EDA, Statistical Modeling, Feature Engineering, Time Series Analysis, ggplot2, Matplotlib, Seaborn, Storytelling with Data

Machine Learning: PyTorch, TensorFlow, Scikit-learn, LangChain, SVM, GBM, PCA, DBSCAN, NLP, Linear/Logistic Regression, Model Evaluation & Validation

Soft Skills: Scientific Writing and Communication, Teamwork, Mentorship, Collaboration