Jason Dean, PhD

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About me: I am an energetic computational scientist with a passion for turning data into information and making the world a better place. I excel in fast paced environments working with data of all shapes and sizes.

EDUCATION

University of Washington, Seattle **2017**
Certificate in Data Science - Fundamentals of machine learning, statistics, and analyzing data at scale

University of California, Los Angeles **2003-2009**
Ph.D. Chemical and Biomolecular Engineering

Georgia Institute of Technology, Atlanta, GA **1999-2003**
B.S. Chemical Engineering, Highest Honors

RESEARCH AND INDUSTRIAL EXPERIENCE

Senior Scientific Programmer **2017-present**
Bellwether Bio, Seattle, WA
- Developed pipelines for extraction, transformation, and visualization of terabyte sized data sets in AWS and GCP
- Constructed probabilistic and machine learning based models to predict disease state from human NGS data
- Packaged existing in-house software into Docker containers to enable reproducible analysis

Senior Research Scientist, Group Leader **2013-2017**
Matrix Genetics, Seattle, WA
- Led a group of three scientists responsible for genome engineering of bacterial strains
- Assisted in all aspects of lab setup, lab operations, and turning an empty lab space into a functional company
- Developed a workflow including design, experimental execution, and data analysis of terabyte sized genomic data sets

Senior Scientist **2011-2013**
Merck Research Labs – Protein Sciences, Palo Alto, CA
- Production of hundreds of recombinant proteins, from microgram to gram quantities, by both transient and stable expression systems to support all aspects of Merck biologics programs
- Developed high throughput automated transfection protocols to enable rapid production of large sets of proteins

Post Doctoral Research Fellow **2010-2011**
Amgen- Cell Science and Technology, Seattle, WA
- ***Project****:* Metabolic engineering and flux analysis of CHO cells for improved production of mAbs
- Developed stable isotope ^{13}C tracer studies to investigate metabolism in recombinant mAb producing CHO cells
- Communicated results in two publications, an international conference presentation, and was given an internal award for innovation

Graduate Student Researcher **2003-2009**
University of California, Los Angeles
Advisor: Drs. James Liao, Metabolic Engineering and Systems Biology Laboratory
- ***Thesis****:* A Synthetic Glyoxylate Shunt for Increased Fatty Acid and Triglyceride Degradation in Hepatocytes
- Developed computational and experiental models of hepatocyte metabolism to identify *E. coli* glyoxylate shunt as potential way to increase fatty acid degradation
- Primary project involved collaboration between four principal investigators and resulted in three publications

Technical Skills

- **Programming Languages:** Python (strongest), R, shell scripting
- **Cloud Computing:** Experience with high performance computing in AWS and GCP environments
- **Machine Learning:** Proficient with both unsupervised and supervised machine learning algorithms. Extensive experience with scientific libraries including scikit-learn, numpy, Pandas, Keras, and jupyter notebooks
- **Data Analysis:** Experience developing software for machine learning, descriptive statistics, inference, and exploratory data analysis using open source and proprietary software
- **Bioinformatics:** Experience leveraging open source tools and developing custom software for NGS data analysis