DAN LANDAYAN

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SUMMARY

Quantitative systems scientist with over a decade of experience in quantitative analysis and statistical modeling. Expertise in Python, R, and advanced statistical methods with proven ability to extract insights from complex, multi-dimensional datasets. Strong background in experimental design, hypothesis testing, and cross-functional collaboration. Seeking to leverage analytical skills and domain expertise in a data science role.

QUALIFICATIONS

- *Programming & Analytics*: Python (pandas, numpy, scikit-learn, matplotlib), R (ggplot2, Bioconductor), Bash scripting, SQL, statistical modeling
- *Machine Learning*: Supervised/unsupervised learning, dimensionality reduction (PCA), regression analysis, clustering, model validation
- *Data Management*: Large-scale dataset processing, NGS data analysis (RNA-seq, scRNA-seq), database querying, data visualization
- *Statistical Analysis*: Experimental design, hypothesis testing, A/B testing, time series analysis, multivariate statistics
- *Tools & Platforms*: Git, Jupyter notebooks, RStudio, GraphPad

EMPLOYMENT

Instructor of Record | San Jose State University, San Jose, CA | 2024

- Designed curriculum for 151 students in upper-division genetics course.
- Implemented modern pedagogy of classical, molecular and population genetics concepts and optimized departmental learning objectives.
- Developed interactive bioinformatics and data science modules for introductory web scraping, statistical analysis, and data visualization.

Postdoctoral Scientist | Stanford University, Stanford, CA | 2019 – 2024

- Analyzed large-scale genomic and behavioral datasets using Python and R to identify neural circuit patterns
- Developed machine learning pipelines for classification of behavioral phenotypes with >85% accuracy
- Processed and analyzed high-dimensional time-series data from real-time neural activity recordings
- Built automated data processing workflows reducing analysis time by 60%
- Mentored junior researchers in statistical analysis and programming best practices
- Published 3 peer-reviewed papers with novel data analysis methodologies

Graduate Student | University of California, Merced, Merced, CA | 2013 – 2019

- Designed and executed complex experiments generating multi-modal datasets (behavioral, molecular, imaging)
- Developed custom Python scripts for automated data collection and preprocessing
- Applied statistical models to identify significant patterns in feeding behavior and neural activity
- Created reproducible analysis pipelines and comprehensive documentation

EDUCATION

University of California, Merced, CA
Ph.D. in Quantitative and Systems Biology (QSB) 2013-2019

University of Missouri, Columbia, MO
PREP (Post-baccalaureate) Scholars Program 2011-2013

University of California, Davis, CA
B.S. in Neurobiology, Physiology, and Behavioral Science 2007-2011

TRAINING COURSES

DeepLearning.AI
Coursera 2025

- Deep Learning
- Probability & Statistics for Machine Learning & Data Science

Imperial College London
Mathematics for Machine Learning 2025
Coursera

- Multivariate Calculus
- Linear Algebra
- Principal Component Analysis

University of Minnesota, Minneapolis, CA
Center for the Improvement of Mentored Experiences in Research (CIMER) 2023
Research Mentor Training

Stanford University, Stanford, CA

Mentoring Fundamentals 2-Day Workshop 2023
Research Mentor Training

PUBLICATIONS AND PAPERS

Submitted:

Donnoban Orozco, **Dan S. Landayan**, Brian Wang, Fred W. Wolf. (2025) Thirst and hunger representation are divergently encoded by neurons expressing the receptor for the NPF/NPY neuropeptide in the Drosophila brain. eLife. 2025.

Cardenas-Iniguez Carlos, Borland Johnathan M., Brown James S., Clemons Tameka, Cushnie Adriana K., Garcia Jacqueline, Akinsanya Jemima, Blanco Ismary, George Brianna, Hassinan Cera W., Hines Timothy J., Jarrett Tanisha G., Ng Rowena, **Landayan Dan**, McCorkle Taylor A., Meckel Katherine R., Metcalfe Mariajose, Montoya Samantha A., Rose Deborah K., Warren Desmond R. (2025) Diversifying the Community of Neuroscience: Lessons Learned from a Cross-Stage Longitudinal Program of Diverse Neuroscientists. NeuroViews. 2025.

Published:

Dan S. Landayan, Fred W. Wolf. (2015) Shared neurocircuitry underlying feeding and drugs of abuse in Drosophila. Biomed J. 2015 Dec;38(6):496-509. doi: 10.1016/j.bj.2016.01.004. PMID

Eric Villalon, Maria R Jones, Christine Sibigtroth, D.V.M., M.S., Sammy J. Zino, Jeffrey M. Dale, **Dan S. Landayan**, Hailian Shen, M.D., Dawn D. W. Cornelison, Ph.D. Michael L. Garcia. (2016) Muscle spindle alterations precede onset of sensorimotor deficits in Charcot-Marie-Tooth type 2E. Genes Brain Behav. 2016 Sep; doi: 10.1111/gbb.12341. PMID

Dan S. Landayan, David S. Feldman, Fred W. Wolf. (2018) Satiation state-dependent dopaminergic control of foraging in Drosophila. Nature Scientific Reports. 2018 April; doi: 10.1038/s41598-018-24217-1. PMID

Eric Villalon, Devin M. Barry, Nathan Byers, Katie Frizzi, Maria R. Jones, **Dan S. Landayan**, Jeffrey M. Dale, Natalie L. Downer, Nigel A. Calcutt, Michael L. Garcia. (2018) Internode length is reduced during myelination and remyelination by neurofilament medium phosphorylation in motor axons. Experimental Neurology. 2018 May; doi: 10.1016/j.expneurol.2018.05.009. PMID

Dan S. Landayan, Brian P. Wang, Jennifer Zhou, Fred W. Wolf. (2021) Thirst interneurons that promote water seeking and limit feeding behavior in Drosophila. eLife. 2021 May; doi: 10.7554/eLife.66286. PMID

Jarrett Tanisha G., Ng Rowena, Cardenas-Iniguez Carlos, Akinsanya Jemima, Blanco Ismary, Borland Johnathan M., Brown James S., Clemons Tameka, Cushnie Adriana K., Garcia Jacqueline, George Brianna, Hassinan Cera W., Hines Timothy J., **Landayan Dan**, McCorkle Taylor A., Meckel Katherine R., Metcalfe Mariajose, Montoya Samantha A., Rose Deborah K., Warren Desmond R. (2023) A developmental approach to diversifying neuroscience through effective mentorship practices: perspectives on cross-identity mentorship and a critical call to action. Frontiers in Integrative Neuroscience. 2023 February; doi: 10.3389/fnint.2023.1052418. PMID

Taehong Yang, Daniel W. Bayless, Yichao Wei, **Dan Landayan**, Ivo M. Marcelo, Yangpeng Wang, Laura A. DeNardo, Liqun Luo, Shaul Druckmann, Nirao M. Shah. (2023) Hypothalamic neurons that mirror aggression. Cell. 2023 March; doi: 10.1016/j.cell.2023.01.022. PMID

AWARDS

NINDS Neuroscience Development for Advancing the Careers of a Diverse Research Workforce Award	2022-2025
Ben Barres Post-Doctoral Fellowship	2022-2023
HHMI Hanna Grey Finalist	2020
NIH Diversity Supplement Post-Doctoral Fellowship	2020-2022
UCSF Institutional Research and Academic Career Development Award (IRACDA) Scholarship (declined)	2019-2023
UC Merced Graduate Division Travel Award	2019
UC President's Dissertation Year Fellowship	2017-2018
Molecular Cell Biology Outstanding Graduate Student Award	2016
Dean's Distinguished Scholar Fellowship Award Scholarship	2016
Cold Spring Harbor Laboratory - Helmsley Scholarship	2015
Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Travel Award	2014
QSB Retreat – Outstanding Oral Presentation Award	2014
QSB Summer Fellowship	2014-2016
QSB Travel Award	2014-2015
Carl Storm Underrepresented Minority (CSURM) Fellowship	2012

REFERENCES

Robert Meisel
meisel@umn.edu

Fred Wolf
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Ramen Saha

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John David
davidj@missouri.edu

Nirao Shah
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