Jordan Grey Bryan

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Work Experience

- **UNC Department of Biostatistics** — Chapel Hill, NC
  Postdoctoral trainee — *May 2023 - present*
- **Broad Institute of MIT and Harvard** — Cambridge, MA
  Associate Computational Biologist I - II — *Sep 2015 - Jul 2018*
  - **Cancer Data Science**: Used statistical learning methods to find links between cancer genomics and treatment response in CRISPR knockout screens. Formulated modified mixed effects model and built optimizer to correct for variable sensitivity to cutting-induced DNA damage. Maintained team R package.
  - **PRISM**: Lead quality control and interpretation of data from the PRISM high-throughput screening technology. Wrote software to automate tailored analyses for scientists who submitted compounds to quarterly screens. Presented hypotheses regarding compound mechanism of action to collaborators in industry and academia.
  - **Vice Chair, Project Brooklyn**: Recruited to task-force charged with reforming laboratory and office space management. Partnered with Brightspot Strategy to design prototypes of new library and co-working spaces. Reported findings and made recommendations to Executive Leadership Team at Broad.

Education

- **Duke University** — Durham, NC
  PhD, Statistics; Certificate in Slavic, Eurasian, and East European Studies — *Sep 2018 – May 2023*
- **Stanford University** — Stanford, CA
  BS, Mathematics with Honors in the Arts — *Sep 2011 – Jun 2015*

Publications

- **Bryan, J.G.**, Hoff P.D., Osburn C.L. (2023) "Routine estimation of dissolved organic matter sources using fluorescence data and linear least squares." *ACS ES&T Water*.
- de Matos Simoes, R., Shirasaki, R. [& 39 others including **Bryan, J.G.**]. (2023) "Genome-scale functional genomics identify genes preferentially essential for multiple myeloma cells compared to other neoplasias." *Nature Cancer*.
- **Bryan, J.G.**, Niles-Weed, J., Hoff P.D. (2022) "The multirank likelihood for semiparametric canonical correlation analysis." *Submitted to the Journal of Multivariate Analysis*, https://arxiv.org/abs/2112.07465
- **Bryan, J.G.**, Hoff, P.D. (2021) "Smaller p-values in genomics studies using distilled auxiliary information." *Biostatistics*.
- Sheffer, M., Lowry, E. [& 29 others including **Bryan, J.G.**]. (2021) "Genome-scale screens identify factors regulating tumor cell responses to natural killer cells." *Nature Genetics*.
- **Bryan, J.G.**, Mandan, A. [& 8 others]. (2021) "Likelihood ratio statistics for gene set enrichment in Alzheimer's disease pathways." *Alzheimer's & Dementia*.
- Dhimolea, E., Simoes, R.D.M. [& 29 others including **Bryan, J.G.**]. (2021) "An Embryonic Diapause-like Adaptation with Suppressed Myc Activity Enables Tumor Treatment Persistence." *Cancer Cell*.
- Wu, J., **Bryan, J. G.** [& 10 others]. (2020) "Opportunities and Challenges for Analyzing Cancer Data at the Inter- and Intra-Institutional Levels." *JCO Precision Oncology*.
- Corsello, S.M., Nagari, R.T. [& 35 others including **Bryan, J.G.**]. (2020) "Discovering the anticancer potential of non-oncology drugs by systematic viability profiling." *Nature Cancer*.
- McFarland, J.M., Ho, Z.V. [& 12 others including **Bryan, J.G.**]. (2018) "Improved Estimation of Cancer Dependencies from Large-Scale RNAi Screens Using Model-Based Normalization and Data Integration." *Nature Communications*.
- Gray, S.W., Gagan, J. [& 12 others including **Bryan, J.G.**]. (2018) "Interactive or static reports to guide clinical interpretation of cancer genomics." *Journal of the American Medical Informatics Association*.
- Meyers, R.M., **Bryan, J.G.** [& 29 others]. (2017) "Computational correction of copy-number effect improves specificity of CRISPR-Cas9 essentiality screens in cancer cells." *Nature Genetics*.
- Mackey, L., **Bryan, J.G.** & Mo, M.Y. (2015) "Weighted Classification Cascades for Optimizing Discovery Significance in the HiggsML Challenge." *Journal of Machine Learning Research, Workshop and Conference Proceedings*.

Additional Research Experience

- **Duke Molecular Physiology Institute (DMPI)** Durham, NC
  Statistician in Residence *Jun 2022 - Jun 2023*
  - **Office hours**: Held weekly office hours for scientists at DMPI. Assisted with data processing in R and advised practitioners on use of statistical methodologies in research.
- **American Statistical Association** Alexandria, VA
  Research Intern *May 2021 - Aug 2021*
  - **State of the federal workplace**: Gathered payroll and employee survey data from federal and third-party websites. Ran regression models and applied dimension reduction techniques to interpret the relationship between payroll statistics and employee satisfaction.
- **Stanford University Department of Statistics** Stanford, CA
  Research Assistant *Jun 2014 - Aug 2014*
  - **Kaggle prediction challenge**: Competed in the HiggsML challenge with the objective of classifying particle decay based on data simulated from the Large Hadron Collider at CERN.

Teaching

- **Head teaching assistant and lab instructor**: STA 101: Data Analysis and Statistical Inference (2018); STA 360: Bayesian Inference and Modern Statistical Methods (2019-2020); STA 199: Introduction to Data Science (2022)
- **Teaching assistant and lab instructor**: STA 325: Machine Learning and Data Mining (2020); STA 521: Predictive Modeling and Statistical Learning (2021)

Academic Service

- **Statistics translator**: Joined collaborative effort organized by The Society for Imprecise Probabilities: Theories and Applications to translate V.P. Kuznetsov's *Interval Statistical Models* from Russian to English (2022-present).
- **GCC Co-Chair**: Served on Duke Statistical Science Graduate Consultative Committee (2019-2020, 2022-2023).
- **Journal review**: Annals of Applied Statistics (AOAS), Alzheimer's & Dementia, Statistical Papers, Statistics and Its Interface.

Awards

Danish Data Science Academy, Visit Grant (2023)
ISBA, Graduate Student Travel Award (2022)
BNP Networking Event, Travel Grant (2022)
Duke University, GSTEG Summer Grant (2021)
Stanford Wrestling, Coaches Award (2015)
Rhodes Scholarship Finalist, District 16 (2014)
Stanford Wrestling, Todd Surmon Award (2012)
Stanford Wrestling, Coaches Award (2012)