Anne Branum-Jiao

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Results-oriented Scientist with 6+ years of experience bridging biomedical research and analytics, specializing in preclinical cancer research and immunology. Proficient in leveraging analytical tools such as Python, R, SQL, PowerBI, and Tableau for data-driven insights and predictive modeling in multidisciplinary contexts. Expert in designing, executing, and troubleshooting complex experiments with a strong foundation in molecular biology, genetics, and cell biology. Skilled in synthesizing research findings into actionable data visualizations and statistical analyses, contributing significantly to clinical study publications. Demonstrates exceptional ability in cross-disciplinary collaboration, ensuring comprehensive data integration, analysis, and compliance with scientific standards. Adept at organizing and communicating complex data sets to foster information sharing and support strategic decision-making in research projects.

Professional Experience

Clinical Research Scientist (part-time)   Dec 2021 – Present
Audie L. Murphy VA Hospital/UTHSCSA   Remote
- Provided technical support for research software tools, ensuring issues were resolved efficiently.
- Innovated analytics practices by developing dashboards in PowerBI and Tableau, optimizing visualization of cohort demographics and budget management, as well as novel compilation of open-source genetics data.
- Designed figures for publications in Adobe Illustrator after generation in R, oversaw organization of figures, legends, and main texts. Assisted in grant writing, experimental design, SOP development and submission of forms required by the NIH.

Senior Associate Scientist   Dec 2021 – Jul 2023
Molecular Templates   Austin, Texas
- Oversaw changeover to third party software integration of lab notebook system called Benchling, troubleshooting and resolving technical issues, and teaching users different implementation methods.
- Designed and executed new experiments, developed protocols, and oversaw onboarding, training, and mentoring of new lab personnel.
- Compiled and analyzed datasets using SQL, Python, and R, contributing to data-driven decisions, integrated queries in Benchling to meet research needs.

Research Assistant   Nov 2017 – Dec 2021
Audie L. Murphy VA Hospital/UTHSCSA   San Antonio, Texas
- Clinical immunology and infectious disease research partnering with the University of Texas Health Science Center at San Antonio. Researched phenotypic and epigenetic determinants of Covid-19, HIV, AIDS, allergy, and asthma using flow cytometry, ELISA, qPCR, and cytokine multiplex. Oversaw processing, storage, and logging of patient samples.
- Analyzed and compiled results for downstream analysis with R, automated research tasks with Python.

UTSA/SwRI Undergraduate Research Assistant   Feb 2012 – May 2015
Eric Schlegel/Chris Packham/Southwest Research Institute   San Antonio, Texas
- Researched the effects of mass loss on active galaxies possibly leading to galactic death by developing an online database and cataloging information pertaining to infrared observations of active galactic nuclei (AGN) for several different categories and hundreds of galaxies with web scraping in Python.
- Tested, troubleshot, and optimized imaging hardware for use in future satellites and spacecraft by using a wave generator and software to anticipate and reduce visual noise created by movement in orbit.

Leadership and Education

Master of Science, Data Science **(**In Progress)
University of Texas at Austin – GPA: 4.0

Bachelor of Science, Physics, Cum Laude
University of Texas at San Antonio, Honors College – GPA: 3.5

Society of Physics Students UTSA Chapter, Vice President
Sigma Pi Sigma Honors Society UTSA Chapter, President

Skills and Expertise

Biological:
Biological sample processing and storage, Benchling, IND filing, project management and documentation

Technical:
GraphPad PRISM, Python, R, Java, SQL, PowerBI, Tableau, Image J, FlowJo, LabVIEW, Mathematica.

Publications and Support

- Ahuja, SK, Manoharan, MS, Lee, GC, McKinnon, LR, Meunier, JA, Steri, M, Harper, H, Fioriollo, E, Smith, AM, Restrepo, MI, **Branum AP**, et al. (2023) Immune resilience despite inflammatory stress promotes longevity and favorable health outcomes including resistance to infection. *Nat Commun.*
- Smith AM, Harper N, Meunier JA, **Branum AP**, et. al. (2021) Repetitive aeroallergen challenges elucidate maladaptive epithelial and inflammatory traits that underpin allergic airway diseases, *J Allergy Clin Immunol.*
- Lee GC, Restrepo MI, Harper NL, Manoharan MS, Smith AM, Meunier JA, Sanchez-Reilly S, Ehsan A, **Branum AP**, et. al. (2021), Immunologic resilience and COVID-19 survival advantage. *J Allergy Clin Immunol.*
- Smith AM, Ramirez RM, Harper N, Jimenez F, **Branum AP**, et. al. (2021), Large-scale provocation studies identify maladaptive responses to ubiquitous aeroallergens as a correlate of severe allergic rhinoconjunctivitis and asthma. *Allergy.*