JUSTIN WATERFIELD

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PROFILE

Experienced bioinformaticist and medical laboratory scientist with a background in both data science and healthcare. Trained as an electron microscopist, flexible and able to perform many roles, including data analyst, data scientist, clinical laboratory operations and logistics, microscopy and microtomy techniques, and digital pathology. Demonstrated leadership as working group manager, safety officer, EHR subject matter expert, and chair of recruitment and retention committee for DUHS clinical laboratories. A strong team player with excellent communication skills, and a desire to grow in both understanding and leadership.

Technical Skills: Software: Microsoft OS, Microsoft Office including Outlook/Word/Excel/Teams/PowerPoint, Mac OS, Adobe Creative Suite

Data Science: R, Python, SQL, Tableau **GitHub Portfolio**

EDUCATION

DUKE UNIVERSITY, School of Medicine, Durham, NC
Master of Management in Clinical Informatics, August 2020, 3.7 GPA
Relevant coursework includes: Health IT Business Solutions, Applied Data Science, Foundations of Strategy, Healthcare Finance, Operations and Supply Chain Management, Managerial Analysis, Clinical Informatics Strategy, Data Information and Knowledge, Management and Organizations, Cost and Managerial Accounting, Introduction to Marketing Analysis, Clinical Informatics Ethics

Practicum: Evaluate a Duke Health Technology Services Transition to a Revenue Generating Business Model

- Using Service Based Costing, enhanced IT service Management, and the implementation of a Cost Transparency tool, we can determine the different needs and requirements of the DHTS IT customer population in order to help meet their individual goals.
- After interviewing service owners, working closely with DHTS finance, and conducting research on Information Technology Infrastructure Library (ITIL), a potential financial model was presented to senior leadership underlining the challenges and benefits of a proposed model change.

WINTHROP UNIVERSITY, Rock Hill, SC
***Bachelor of Science,* Biology**, 2009

PROFESSIONAL EXPERIENCE

RTI International, RTP, NC 2020-Present
World Renowned Non-profit Research Institute
GenOmics, Bioinformatics, and Translational Research Center
Biostatistics and Epidemiology Division
Bioinformaticist, Systems Analyst 3 (*2020-Present*)

- Working group manager for the PhenX Psychosocial & Social Determinants of Health Working Group
- Project Member of the BRAIN Initiative
- Prepare, analyze, and visualize data across various science and research domains for reports, projects, and proposals
- Ensure datasheet quality, development, and deployment for the PhenX Toolkit
- HL7 and healthcare/EHR data subject matter expert
- Variable mapping of COVID-19 related datasets
- REDCap development of datasheets

Duke University, Durham, NC 2022-Present
Top Private Research University
Master of Management and Clinical Informatics
College of Medicine
Co-Mentor Student Practicum: Develop a model to unify the data elements in FHIR & OMOP (*2022-Present*)

- Collaborate with Dr. Ed Hammond to guide a group of graduate students in completion of their master's practicum (thesis) project
    - Mapping variables and data models is a costly and time-intensive endeavor, we are proposing a shared data model
    - Aligning the data elements in FHIR and OMOP will require changes in both data models
    - Initial goal is to produce documentation on how this objective will be accomplished, so that other groups can build on this work

Duke University, Durham, NC 2020-2021
Master of Management and Clinical Informatics
College of Medicine
Data Science Teaching Assistant (*2020-2021*)

- Teaching Assistant for the Graduate level class: Applied Data Science 517
- Assist the professor in giving lectures, preparing materials, and grading assignments
- Teach the students additional fundamentals such as introduction to coding, setting up an IDE, and basics of machine learning
- Facilitate the learning of data visualization, machine learning, artificial intelligence, and the data science pipeline with a healthcare emphasis

DUKE UNIVERSITY HEALTH SYSTEM, Durham, NC 2009-2020
World Class Academic Medicine Center Health System
Molecular Pathology
Medical Laboratory Scientist, Advanced (*2009-2020*)

- Analyze and assess 600+ clinical patient samples a year to assist pathologists in diagnosing infectious diseases, using Surgical Pathology Electron Microscopy (SPEM)
- Prepare and verify EM diagnostic virology samples to assist clinicians with patient diagnosis
- Accountable for efficient supply chain management and logistical operations of laboratory

Beaker Super User *(2018-2020)*

- Perform all Beaker accessioning and troubleshooting. often called to solve Beaker problems and work within Electronic Health Record (EHR) to perform tasks related to patient care
- Train and advise coworkers on proper system protocol
- Work in test environment to prepare for upcoming production releases

Recruitment & Retention Committee Chair *(2020)*

- Lead, coordinate, and set agenda for committee
- Communicate and organize outreach with local schools and organizations for outreach opportunities
- Work alongside other work culture committee chairs, as well as HR staff to create a positive and thriving environment for DUHS employees

Recruitment & Retention Committee Co-Chair (*2016-2020)*

- Worked alongside the Manager of Molecular Pathology (MMP) to manage R&R meetings
- Facilitated monthly work culture meetings related to the R&R committee to update members of hospital administration on our progress and work on future endeavors
- Maintained relationships with local schools and staff by reaching out, connecting, and collaborating to schedule and set up visits as Career Outreach
- Facilitated a program for DUHS employees to have an opportunity to shadow and visit other labs in the DUHS clinical laboratory system in Career Shadowing:

PUBLICATIONS

Ha CI, Desai AK, **Waterfield J**, Kazi ZB, Austin SL, Bossen EH, Kishnani PS, Buckley AF. "Outside the Fiber: Interstitial Pathology of Skeletal Muscle in Infantile Pompe Disease". *Molecular Genetics and Metabolism. January–February, 2017.* Volume 120, Issues 1-2, Pages S60–S61. DOI: 10.1016/j.ymgme.2016.11.136

Ropelewski, A. J., Rizzo, M. A., Swedlow, J. R., Huisken, J., Osten, P., Khanjani, N., ... & Huggins, W. (2021). Essential metadata for 3D BRAIN microscopy. *arXiv preprint arXiv:2105.09158*.