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A. Education
- Ph.D. Bioinformatics. University of Arkansas - Little Rock. Little Rock, AR. *May 2019.*
  Title: *Machine Learning Algorithms for Studying Disease Features and Applications.* Advisor: Xiuzhen Huang, Ph.D.
- M.S. Computer Science. Arkansas State University. Jonesboro, AR. *May 2004.*
- B.S. Computer Science. Arkansas State University. Jonesboro, AR. *May 2002. Cum Laude*

B. Publications
- *Lung cancer screening with low-dose CT scans using a deep learning approach*, Jason L. Causey, Yuanfang Guan, Wei Dong, Karl Walker, Jake A. Qualls, Fred Prior, and Xiuzhen Huang. *arXiv:1906.00240*, 2019.
- *Arkansas AI-Campus Method for the 2019 Kidney Tumor Segmentation Challenge*, J. L. Causey, J. Stubblefield, T. Yoshino, A. Torrico, Jake A. Qualls, and X. Huang. Kidney and Kidney Tumor Segmentation Challenge (KiTS19). 2019.
- *Minor QTLs mining through the combination of GWAS and machine learning feature selection.* Wei Zhou, Emily Bellis, J. Stubblefield, J. L. Causey, Jake A. Qualls, Karl Walker, Xiuzhen Huang. *BioRxiv:712190*, 2019.
- *CNNcon: A Quantitative Imaging Tool for Lung CT Image Feature Analysis*. J. L. Causey, Jake A. Qualls, J. H. Moore, F. Prior, and X. Huang. *BioRxiv:615492*, 2019.
- *Highly accurate model for prediction of lung nodule malignancy with CT scan*, Jason L. Causey, Junyu Zhang, Shiqian Ma, Bo Jiang, Jake A. Qualls, David G. Politte, Fred Prior, Shuzhong Zhang and Xiuzhen Huang. Scientific Reports. August 2018.
- *CS1 students' understanding of computational thinking concepts*, Jake A. Qualls, Michael M. Grant, and Linda B. Sherrell. Journal of Computing Sciences in Colleges. Vol 26, Issue 5, 62-71. May 2011.
- *Why computational thinking should be integrated into the curriculum*, Jake A. Qualls and Linda B. Sherrell. Journal of Computing Sciences in Colleges. Vol 25, Issue 5, 66-71. May 2010.

C. Research Interests
- The application of Machine Learning and Data Science to address cross-disciplinary research questions.
- Probabilistic reasoning models and their role within Artificial Intelligence.
- Computer Science education, collaboration, and outreach.

D. Presentations
- *EAGER - New Approach: Early Diagnosis of Alzheimer's Disease Based on Magnetic Resonance Imaging (MRI) via High-Dimensional Image Feature Identification*, Jake A. Qualls, Jason L. Causey, Johnathon Stubblefield, and Xiuzhen Huang. Presentation at 2020 NSF Smart and Connected Healthcare (SCH) PI Meeting. NSF. Alexandria, VA. Jan. 6-7, 2020.
- *Introducing the NBT Division for Advanced Data Sciences and Learning,* Jake A. Qualls. Presentation at No-Boundary Thinking Conference. Trinity University. San Antonio, TX. Dec. 2019.
- *Study the co-occurrence patterns of Metagenomics high-throughput sequencing data*, John Clay Heern (Presenter), Jason L. Causey, Jake A. Qualls, and Xiuzhen Huang. Poster presented at 2018 NSF Research Experiences for Undergraduates (REU) Symposium. Alexandria, VA. October 28-29, 2018.
- *Highly accurate model for prediction of lung nodule malignancy with CT scans*, Jason L. Causey, Junyu Zhang, Shiqian Ma, Bo Jiang, Jake A. Qualls, David G. Politte, Fred Prior, Shuzhong Zhang and Xiuzhen Huang. Poster presented at NIH NCI QIN meeting. November 2017.

E. Grants
- Arkansas Department of Education STEM Grant, *Computer Science Praxis (5651) Preparation Institute*. June - July 2016. Awarded $32,950.
- Student Undergraduate Research Fellowship (SURF) - Arkansas Department of Higher Education, *Using Machine Learning to Automate Detection of Cyberbullying Tweets*, Mentor: Jake A. Qualls, Student: Christopher Saldivar. January - May 2016. Awarded $2,750.

F. Professional Activities
- Arkansas Department of Education - Computer Science K-8 Curriculum Standards Meeting. *Committee Member*. October - December 2015.
- Arkansas Department of Education - Computer Science Praxis 5651 Review Meeting. *Committee Member*. August 2015.
- Arkansas Department of Education - Computer Science Curriculum Framework. *Committee Member*. January 2015.

G. Awards
- SMART Center Advising Award. *Awarded*, Spring 2018.
- You Made A Difference Academic Advising Award. *Nominated*, Fall 2013.