

# James Andrew Taylor

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**EDUCATION**     *Bachelor of Science, Physics*     May 2017  
College of Charleston  
Charleston, SC

**EMPLOYMENT**     *Image Analyst*     January 2020  
Radiology Department at MUSC     - Present

- Used Pandas to help manipulate and model time series clinical data
- Performed segmentation in white matter, gray matter, and vasculature
- Delivered group-wise statistical comparisons from raw MR and behavioral data
- Determined and presented on validity of new tools; simulated noise and image artifacts to test limits
- Used packages such as SPM, FSL, ANTS, and Freesurfer

*Image Analyst*     August 2017  
Center of Biomedical Imaging at MUSC     - September 2019

- Applied newest MR software to existing datasets of structural and diffusion MRI
- Used object oriented programming to generalize existing pipelines for ever-changing image sequences

**COMPUTER SKILLS**     MATLAB and Python

**PUBLICATIONS AND PRESENTATIONS**     J. A. Taylor. Associations between winscat performance and local pre- to postflight changes in brain structure. *NASA Human Research Program Investigator's Workshop*, February 2024.

Tidwell J.B. and Taylor J.A. et al. Longitudinal changes in cerebral perfusion, perivascular space volume, and ventricular volume in a healthy cohort undergoing a spaceflight analog. *American Journal of Neuroradiology*, 44(9):1026–1031, 2023.

Collins H.R. Jillings S. Jeurissen B. Barisano G., Sepehrband F. and Taylor J.A. et al. The effect of prolonged spaceflight on cerebrospinal fluid and perivascular spaces of astronauts and cosmonauts. *Proceedings of the National Academy of Sciences*, 119(17):e2120439119, 2022.

- Coker M.A. Rosenberg, M.J. and J.A. et al. Taylor. Comparison of Dural Venous Sinus Volumes Before and After Flight in Astronauts With and Without Spaceflight-Associated Neuro-Ocular Syndrome. *JAMA Network Open*, 4(10):e2131465–e2131465, 10 2021.
- Roberts D.R., Collins H.R., Lee J.K., and Taylor J.A. et al. Altered cerebral perfusion in response to chronic mild hypercapnia and head-down tilt bed rest as an analog for spaceflight. *Neuroradiology*, 2021.
- Bryant L., McKinnon E.T., and Taylor J.A. et al. Fiber ball white matter modeling in focal epilepsy. *Human Brain Mapping*, 2021.
- Rodriguez-Porcel F., Wilmskoetter J., and Taylor J.A. et al. The relationship between dorsal stream connections to the caudate and verbal fluency in parkinson disease. *Brain Imaging and Behavior*, 2020.