Andrew Taylor

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WORK EXPERIENCE

Medical University of South Carolina, Radiology Department **Jan. 2020 – Sep. 2024**
Data Analyst *Charleston, SC*

- As the sole data analyst of my lab, I led a team of five medical students and undergraduate assistants which delivered results for four papers with a mean impact factor of eight.
- Responsible for analysis of American astronaut data in first ever international collaboration paper involving NASA, the European Space Agency, and Russian Roscosmos.
- Delivered group-wise statistical comparisons from raw MRI and performance data.
- Performed data analysis including image segmentation, artifact correction, and time series modeling of clinical data using MATLAB and Python libraries such as Pandas, statsmodels, and Matplotlib.
- Contributed to every part of published manuscripts as second and third author.

Medical University of South Carolina, Center for Biomedical Imaging **Aug. 2017 – Sep. 2019**
Data Analyst *Charleston, SC*

- Used object oriented programming to generalize existing pipelines for ever-changing image sequences.
- Adapted cutting-edge tools for new datasets.
- Performed and presented on simulations which evaluated image registration tools.
- Trained new researchers and led weekly technical lessons.

EDUCATION

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

PROJECT: Personal Website

andrewtaylor11235.com

- Developed a full-stack web application featuring a React frontend and a Python backend built with FastAPI.
- Created a computer vision tool to detect and interpret Go board positions, letting the user to continue play in the browser.
- Hosted site an AWS EC2 instance with Nginx.
- Integrated a PostgreSQL database to store user-submitted images and metadata.

SKILLS

- **Languages:** Python, SQL, MATLAB, Bash
- **Libraries and Tools:** git, Docker, Tableau, Pandas, Matplotlib, statsmodels, OpenCV, Postgres
- **Platforms:** Linux, AWS

PRESENTATIONS AND PUBLICATIONS

- Taylor J. A. Associations between WinSCAT performance and local pre- to postflight changes in brain structure. *NASA Human Research Program Investigator's Workshop*, 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*, 2023.
- Barisano G., Sepehrband F., Collins H.R., Jillings S., Jeurissen B., 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*, 2022.
- Rosenberg M.J., Coker M.A., and Taylor J.A. et al. Comparison of dural venous sinus volumes before and after flight in astronauts with and without spaceflight-associated neuro-ocular syndrome. *JAMA Network Open*, 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.