Chris Waid

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EDUCATION

Georgia Institute of Technology, Atlanta, GA

Master of Science in Analytics, Computational Data Analytics Track Aug 2024 – Aug 2026

Bachelor of Science in Biomedical Engineering Aug 2021

Minor: Computer Science, Artificial Intelligence concentration

Certifications

Eagle Scout, Boy Scouts of America

EXPERIENCE

R&D Front End Data Scientist, *Johnson & Johnson MedTech | Surgery* June 2024 – Present

- Led the development of next-generation Advanced Energy surgical instrument, including patent/IP disclosures (7 published), digital feature development, VoC Market Research, experimental design, data analysis
- Implemented Random Forest and Neural Network models to uncover novel insights about tissue and vessel sealing for Advanced Energy surgical instruments using Python & Dataiku for MLOps
- Developed Python scripts and modules for post-processing, regression, classification, and time-series analysis, using Pandas, NumPy, Stumpy, Plotly, SciPy, Scikit-Learn, TensorFlow, Keras, XGBoost, LightGBM, DTW, utilizing Azure Kubernetes Service

R&D Digital Engineer, *Johnson & Johnson MedTech | Surgery* Sep 2021 – June 2024

- Created an Anomaly Detection ML model in Python using Isolation Forest to uncover a critical failure mode in 4 out of 9,000 test data points; deployed to Azure for scalability across teams. Insights led to a design change that improved tool reliability and performance. Version control using Git and Bitbucket
- Implemented novel control scheme algorithm for surgical instrument in C
- Built an object-oriented signal processing Python module with low/high pass, rolling window filtering, and PCA. Implemented unit testing with PyTest and managed version control using Git and Bitbucket
- Authored submission to the 2023 J&J MedTech Data Science Showcase, winning Top Poster Award
- Built data acquisition framework in Python on top of existing ROS application. Designed SQLite3 SQL database to store post-processed metrics and Tableau dashboards for visualization

R&D Design Engineering Co-op*, J&J MedTech | Surgery, Robotics & Digital Solutions* Aug 2019 – Aug 2020

- Leveraged SVM and fuzzy K-means machine learning techniques to identify key distinguishing features in tissue; work resulted in granted patent US 11,957,342 B2
- Applied statistics within Minitab including a Gage R&R, Type 1 Gage Study, DOE, and ANOVA to demonstrate the feasibility of adding a new device feature

Research Assistant, *Hu Bio-locomotion Lab* May 2019 – May 2020

- Analyzed tensile testing on wombat intestines using MATLAB Kalman Filter for automated image processing and computation. Published research in the journal *Soft Matter*

LEADERSHIP

Johnson & Johnson MedTech | Surgery 2022-Present

- University Team Lead for Georgia Tech design engineering co-op recruiting
- Specialty lead for Data Science co-op and new college hire recruiting

Eagle Scout, Peachtree Corners, GA Feb 2017

Eagle Scout Project - Refurbished Stations of the Cross trail at Mary Our Queen Catholic Church

- Led team of volunteers through creation of new Stations of the Cross, including budget and PM

SKILLS

Programming, Innovation, Communication, and Engineering Concepts

Artificial Intelligence, Machine Learning, Python, R, SQL, Git, Java, MATLAB, C, C#, Data Structures and Algorithms, Data Visualization, Physiology, Tissue Science, VoC Market Research, Patents/IP, Presentations, Signal Processing, Customer Service, Statistics, Multivariable Calculus, Research, Engineering, Biomechanics

PERSONAL INTERESTS: Camping, Missions, Sports, Data Science Applications in Sports