

Daniel Wang

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EDUCATION

Johns Hopkins University

BS/MS in Applied Mathematics & Statistics

Baltimore, MD

Expected May 2026

SKILLS

- **Python:** scikit-learn, MNE-Python, PyTorch, pandas, NumPy, SciPy, matplotlib, seaborn, ZeroMQ
- **DevOps & Tools:** Git, GitHub, Bash, Docker, AWS (EC2, S3)

WORK EXPERIENCE

Data Science Intern, *Sri Sarma Lab* — Baltimore, MD

Aug 2023–Present

- Discovered a **novel neural signal processing biomarker** through patient dynamical network models, improved prediction accuracy of surgical outcomes in drug-resistant epilepsy patients **by 40%**; **first-author** journal publication pending.
- Engineered a channel-specific ML classification system with ensemble majority voting. Analyzed biomedical signals from the middle temporal gyrus to predict subject decisions with **up to 98% accuracy**; **first-author** publication at IEEE CISS 2025.
- Architected a real-time seizure detection system by integrating patient-specific dynamical network models with a PCA and QDA classification pipeline, validating system performance with **92% detection accuracy**.

CTO, *Civitas AI* — Baltimore, MD

Mar 2025–Jun 2025

- Architected and implemented a full-stack, agentic AI voice assistant (LangGraph, LiveKit, and NextJS/FastAPI) to automate customer service calls, demoed prototypes to federal agencies (FDA, NOAA, and state DOTs).
- Secured **\$10,000** in funding by presenting to judges at the JHU Innovation & Entrepreneurship competition.

SWE Intern, *University of Washington Center for Neurotechnology* — Seattle, WA

Jun 2024–Aug 2024

- Engineered a **low-latency (<100ms)** real-time data ingestion for the FDA-cleared Natus Quantum EEG amplifier utilizing a scalable Publisher-Subscriber architecture via ZeroMQ and Python.
- Validated system performance through live technical demonstrations for senior scientists at Natus Medical Inc. and the 2024 UW Center for Neurotechnology Symposium.

R&D Engineer Intern, *ThermOptik* — Baltimore, MD

Sep 2022–Jun 2024

- Invented and patented (No. 18115391) a closed-loop medical device system for cataract surgery, optimizing thermal regulation to reduce intraocular lens unfurling time **by 80%**.
- Designed and tuned PID control algorithms and custom heat sink hardware, achieving system stability specifications **within a 90-second** operational window.

ACTIVITIES

President, *JHU Brain-Computer Interface Society* — Baltimore, MD

Aug 2022–May 2025

- Directed development of a hybrid BCI system, integrating EEG & EMG biomedical signal acquisition pipelines to control a 3-DOF interface, presented at the **2024 BMES Conference** and published as **first author** on preprint.
- Engineered **signal processing algorithms** (CCA for EEG SSVEP, Logistic Regression for EMG) to decode user intent, validating system efficacy through live demonstrations to industry leadership (CEO of DEKA R&D).
- Reproduced state-of-the-art performance in decoding speech from neural signals, achieving a **9.1%-word error rate** using Recurrent Neural Networks (RNNs) on neural signals from microelectrode array data.