

Chad Williams

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SENIOR DATA SCIENTIST

WEARABLE BIOMETRICS | MACHINE LEARNING | SIGNAL PROCESSING

- Designed interactive platforms integrating various biometrics for data processing, quality assessment, and ML classification to optimize cognitive performance and mental health.
- Developed generative AI-driven signal processing solutions, improving neural decoding by 16% and outperforming 71% of benchmarks in model discovery.

WORK EXPERIENCE

Senior Scientist

Brown University | September 2022 – Present

- Developed generative AI tools to improve neural decoding accuracy by 16%
- Validated symbolic regression for model discovery, outperforming 71% of benchmarks
- Developed data pipelines and reinforcement learning models for chronic pain research

Data Scientist

Inward VR | June 2023 – Present

- Integrated multiple biometric devices for seamless real-time monitoring
- Designed application for real-time biometric data recording and transmission
- Developed scalable pipelines for biometric analytics with VR applications

Data Scientist

Canadian Sport Institute Pacific | March 2022 – September 2023

- Built interactive data analysis apps for optimizing canoe and kayak race performance
- Automated performance reporting, improving accessibility for athletes and coaches
- Created dynamic data visualizations to support decision-making

Research Associate

Divergence Neuro | July 2021 – September 2022

- Assessed mobile EEG systems to evaluate data quality for mental health applications
- Created an automated EEG processing pipeline with interactive report generation
- Explored EEG-based neurofeedback solutions to enhance therapeutic outcomes

Professor & PhD Researcher

University of Victoria | January 2015 – September 2022

- Worked with industry collaborators, including InteraXon, L3Harris, and Avertus
- Validated wearable EEG devices and built BCI applications
- Developed computational models to understand reasoning in the brain using EEG

EDUCATION

PhD in Neuroscience – University of Victoria | 2022

MSc in Neuroscience – University of Victoria | 2018