T. RILEY DAWSON

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github.com/gnarlywhale

EDUCATION

University of Alberta
MBA\MEng (Computer Engineering; Expected) 2019 - 2023
MEng focus on Reinforcement Learning

上智大学 - Sophia University
Summer Session in Asian Studies Summer 2014

University of Alberta
BSc Eng - Software Option 2008 - 2014

PROFESSIONAL EXPERIENCE

Gaze and Movement Analysis Inc.
Co-founder, CTO July 2021 - Present
GaMA is a spin-off venture based on research out of the BLINC Lab. We provide task-agnostic human performance analytics based on motion, gaze, and various other data streams.

The Bionic Limbs for Improved Natural Control Lab, University of Alberta
Software Engineer In Training Oct. 2016 - Present
Supervisors: Dr. Craig S. Chapman, Dr. Jacqueline Hebert, Dr. Patrick Pilarski
Primary focus is on developing **Gaze and Movement Assessment (GaMA)**, a robust software platform for universal multi-modal motion data analysis.

Diesel Tech Industries
Software Engineer In Training June 2015 - October 2016
Fully designed and implemented a web-based application for tracking employee hours.

Common Grounds Arts Society
Android\iOS Developer April 2014 - July 2014
Sole developer of the official "Found Festival" app

CONFERENCE PRESENTATIONS & WORKSHOPS

6. Stone S., Boser Q., **Dawson T.R.**, Vette V., Hebert J., Pilarski P., Chapman C. (2022). Generating accurate 3D gaze vectors using synchronized eye traacking and motion capture. Springer. Behavioural Research Methods. https://doi.org/10.3758/s13428-022-01958-6

5. Stone S., Boser Q., **Dawson T.R.**, Vette V., Hebert J., Pilarski P., Chapman C. (2021). Subcentimeter 3D gaze vector on real-world tasks: an investigation of eye and motion capture calibration routines. Association for Computing Machinery (ACM) Symposium on Eye Tracking Research & Applications (ETRA). Stuttgart, Germany.

4. Cuthbertson L., Kearney A., **Dawson T.R.**, Zawaduk A., Cuthbertson E., Gordon-Tighe A., Mathewson K. (2019) Women, politics and Twitter: Using machine learning to change the discourse. Neural Information Processing Systems Foundation (NeurIPS) Conference. Vancouver BC.

3. Boser Q., **Dawson T.R.**, Lavoie E., Valevicius A., Pilarski P., Vette A., Chapman C., Hebert J.(2019). Characterizing the Eye Gaze Behaviour of Body-powered Prosthesis Users. ISPO Canada RehabWeek (Abstract and Oral Presentation).

2. Boser Q., **Dawson T.R.** *(Presenting Author)*, Valevicius A., Vette A., Pilarski P., Hebert J., Chapman C. (2018). A flexible software platform for integrating eye tracking and motion capture data for measuring human movement behaviour in a reconstructed 3D environment. Presented at the Canadian Action and Perception Network (CAPnet) Canadian Physiological Society (CPS) Satellite Symposium at the Canadian Association for Neuroscience (CAN) Conference. Vancouver BC.

1. Stone S.A., **Dawson T.R.**, Boser Q., Hebert J.S., Chapman C.S. (2018). Using Lab Streaming Layer to collect synchronized multimodal datasets. Presented at the Canadian Action and Perception Network (CAPnet) Canadian Physiological Society (CPS) Satellite Symposium at the Canadian Association for Neuroscience (CAN) Conference. Vancouver BC.

PERSONAL PROJECTS

Venture Capital Investment Competition
Sobey School of Business — March 4 2022
Competed with the University of Alberta's MBA team, achieving 2nd place overall

AXIS Reloaded
University Of Alberta Faculty of Engineering — September 2019 - October 2019
Design and development of control software for a robotic display platform

aNAOmate
Edmonton Catholic School Board — July 2019 - August 2019
Directed design and implementation of a simplified control interface of Nao robotic platform for elementary education applications

VR MariNAOette
ISARC Constructing Futures Hackathon — May 2019
Integration of a cloud-based image classifier with the Nao robotic platform

HumanMachine
Edmonton Fringe Festival — April 2014 - July 2014
Created MariNAOette robotic control interface and piloted robotic performance for the HumanMachine Artificial Intelligence Improv show

AWARDS

Dyan and Karyn Triffo Awards for Innovation ($4000)	May 2022
ISARC Constructing Futures Hackathon - **1st Place** ($1000)	May 2019
Jason Lang Academic Scholarship ($1000)	August 2010, 2013
Stowkowy Scholarship in Engineering ($1500)	August 2010
University of Alberta Academic Excellence Scholarship ($1250)	August 2008

GRANTS RECEIVED

Mitacs, "Accelerate Entrepreneur," $120,000	July 2022-2023
Campus Alberta Neuroscience, "CAN Entrepreneurship Seed Grant," $29,596	July 2019

VOLUNTEER & SERVICE

Edmonton Advisor Council on Startups (EACOS) Member	March 2021 - Present
University of Alberta Faculty of Engineering Student Leadership Group	October 2019 - Present
UAlberta Move-In Day Volunteer	September 2019
WISEST Workshop Leader	February & November 2019
South Sudanese Youth of Canada Conference- Photographer	July 2018

FIRST Lego League Competition Judge January 2019 & January 2018

TECHNICAL STRENGTHS & EXPERIENCE

Languages	English (Fluent), French (Intermediate), Japanese (Beginner)
Computer Languages & Software	MATLAB, Python, R, JavaScript, C#, Java, LaTeX
Experimental Techniques	Motion capture, Eye tracking, Data Analysis