

Seth Briney – Machine Learning Engineer
Email: SethLBriney@gmail.com
Website: SethBriney.com

Master of Science - Computer Science	Master of Science - Mathematics	BA/BS
Western Washington University GPA 3.87 Year: 2023	Western Washington University GPA 3.87 Year: 2019	TESC 2017

Technical Skills

Python Modules: Gymnasium/OpenAiGym, MatPlotLib, Numpy, Pandas, PyGame, PyTorch, RL-Baselines Zoo 3 / Stable Baselines 3, SciKit-Learn, TensorFlow, WandB

Cloud and Virtualization: AWS, Azure, Colab, Docker, SSH

Computational Techniques: Bayesian Decision Theory, Distributed Computing, Transfer Learning

Data: EnergyPlus, Excel, SQL

Languages: BASH, C, C++, C#, Java, Julia, MATLAB/Octave, Python, R

Machine Learning: Deep Learning, Reinforcement Learning, Statistical Data Analysis

Workflow: Git, LaTeX, Linux, Project Collaboration

Notable: Python (6 years), Pytorch (4 years), Numpy (5 years), Linux (10 years), Machine Learning (7 years).

Machine Learning Engineer Intern	CompuMatter	FEB 2024 - PRESENT
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- Custom generative LLM solutions.
- Strategic design and implementation of safe ethical AI systems web development and cloud services.

Research Associate	Western Washington University	AUG 2023 - JAN 2024
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- Collaborated with [PNNL](#) sponsors in a grant funded research project.
- Communicated complex AI concepts and visualizations to technical and non-technical audiences.
- Applied Deep Reinforcement Learning toward constrained energy management and reference tracking.
- Worked with physics simulators, commercial and residential building systems.
- Contributed to the open source [Neuromancer](#) project, being recognized as a notable contributor.

Graduate Research Assistant	Western Washington University	MAR 2022 - AUG 2023
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- Grant funded research collaboration related to *load forecasting* project in simulated office buildings.
- Delivered on a complete regression ML model cycle from development to deployment.
- Compared various Deep Learning ML models in production, improving on previous R^2 metric to 0.98.
- Collaborated with building domain experts to ensure expertise was embedded in model selection.

College Tutor	Bellingham Tech. , Skagit Valley Col.	DEC 2019 - MAR 2022
Graduate Teaching Assistant	Western Washington University	OCT 2021 - MAR 2022
Teaching Assistant	The Evergreen State College	OCT 2020 - JUN 2021
On-site Manager	CompuMatter	JUN 2020 - SEP 2020
Landscape Site Manager	Contractor	JUN 2012 - JUN 2020

Maze-Runner AI	Modified Q-learning algorithm to prevent agent from getting stuck, allowing it to complete maze.
Climate regression CNN	Predicted the day of the year within 1.4 days, reduced data dimensionality by $\frac{1}{64}$.
Super Mario Bros AI	Computer Vision control – leveraging CnnLstmPolicy from SB3-Contrib , implemented feature engineered action space to enable agent to reach level 2 over 100x faster.