Seth Briney – Machine Learning Engineer	
Email:	SethLBriney@gmail.com
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Master of Science - Computer Science	Master of Science - Mathematics	BA/BS
Western Washington University	*Western Washington University*	*TESC*
GPA 3.87 | Year: 2023	GPA 3.87 | Year: 2019	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, Visualization
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

- Collaborating with the web development team to integrate Large Language Models (LLMs) with RESTful services, enhancing user experience.
- Strategically designed and implemented an alpha version of a safe, ethical AI system in web development and cloud service applications, adapting to collaborative and dynamic project specifications.

Research Associate	Western Washington University	AUG 2023 - JAN 2024

- 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.
- Used physics simulators to generate data, improved numerical stability and robust sampling methods.
- Contributed to the open source Neuromancer project, being recognized as a notable contributor.

Graduate Research Assistant	Western Washington University	MAR 2022 - AUG 2023

- Grant funded research collaboration related to *load forecasting* and *flexibility* project in office buildings.
- 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.
- Implemented and graphically analyzed various cross-climate transfer learning scenarios, improving metrics by 15% vs training on only a single climate.

Teaching Experience	SVC, BTC, TESC, Independent	DEC 2019 - MAR 2022

- Worked interactively with students to help them understand course material. Led workshops and labs, and held 1-1 sessions, both online and in-person.
- Provided feedback on code submissions in Java, Python, and numerical analysis in SageMath.

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.