# Madeline Spawn

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## EDUCATION

**Oregon State University**  September 2023 – June 2025
*Master in Computer Science | Master in Artificial Intelligence*  *Corvallis, OR*

**Oregon State University**  September 2022 – June 2024
*Bachelor of Science in Computer Science*  *Corvallis, OR*

## EXPERIENCE

**Graduate Teaching Assistant**  September 2024 – Present
*Oregon State University*  *Corvallis, OR*
- Collaborated with faculty to hold office hours, graded assignments, and provided academic support to over 70 students.
- Reviewed and refined course materials, including programming assignments, readings, and supplementary resources, for two courses: one focused on open-source development and the other on usability and design.

**Software Development Engineering Intern**  June 2024 – August 2024
*McDonald's*  *Chicago, IL*
- Developed a full stack application using React.js, .NET back-end, REST APIs, and an AWS hosted database to optimize data retrieval in several development environments for domestic and international markets.

**Artificial Intelligence Research Assistant Intern**  June 2023 – November 2023
*Keywords Studios*  *Remote*
- Optimized AI model performance by refining prompts based on feedback, collecting and curating training data, and collaborating with research and engineering teams to implement and validate model enhancements.

## CURRENT RESEARCH PROJECTS

**Artificial Intelligence Research**  September 2024 – November Present
*Oregon State University*  *Corvallis, OR*
- Currently researching under Karthika Mohan on the application of causal inference to Artificial Intelligence, Machine Learning, and Deep Learning, via developing algorithms for future modifications and novel implementations.

## DEVELOPMENT PROJECTS

**Urban Noise Prediction from Aerial Imagery**  September 2024 – Present
- Currently developing a multi-modal (image processing, linear regression, transformer architecture) approach utilizing GIS data high-resolution aerial imagery for urban noise prediction in Portland, OR.
- Processed and cleaned multiple large GIS datasets, utilized APIs to acquire and format high-resolution aerial imagery, and integrated both data sources.

**LSTM-NN for Traffic Prediction During Wildfires**  January 2024 – March 2024
- Developed an LSTM neural network model using high-resolution data from the Caltrans Performance Measurement System to predict traffic patterns via traffic time-series data.

## TECHNICAL SKILLS

**Languages**: Python, C, C++, C#, SQL, JavaScript, HTML/CSS, R
**Frameworks/Libraries**: Node, React.js, Pytorch, Keras, TensorFlow
**Tools**: Git, Github, VS Code, Visual Studio, Jet Brains IDE's (PyCharm, Rider, CLion), Google Colab, Jupyter Notebook, LaTex, Huggingface, Agile, AWS
**Data Analysis/Visualization:** Pandas, NumPy, Matplotlib, Seaborn