

# Hugo Garrido-Lestache

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## SUMMARY

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- **Senior Computer Science Student** at Milwaukee School of Engineering
- Dual enrollment in Undergraduate & Masters of Machine Learning
- Passionate about Researching in AI and Reinforcement Learning, Aspiring Graduate Student with 3 publications.
- **Support me on YouTube:**

## EDUCATION

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**B.S. Computer Science** | Milwaukee School of Engineering | GPA: 3.95 | Expected Winter 2025  
**Game Design & Game Theory Course** | University of Lucca | Lucca, Italy | June 2023

## RESEACH EXPERIENCE

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**Research Assistant | Milwaukee School of Engineering** | January 2025 – December 2025

*With Jeremy Kedziora, Ph.D.*

[Code](#) [Article](#) [Paper](#)

- Developing Reinforcement Learning Algorithms to promote Collaboration in Multi-Agent Environments.
- Got State-of-the-art Performance on a soccer environment and tower building environment.
- Presented at a computing symposium and published a paper.
- Came **1<sup>st</sup>** in the MSOE NVIDIA ROSIE Competition winning over **\$9,000** in prizes.
- **Update with conference news.**

## RESEARCH PROJECTS

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**Research on Developing Education AI Tool**

[Paper](#) (fix me)

*With Ethan Jeffers & Ethan Wrasman*

- Developed AI tools to enhance learning in early programming Education through LLMs.
- Statistically tested these tools to ensure it effectiveness and prevent negative consequences.

**Research on Silent Video Sound Generation**

[Paper](#)

*With Adam Haile & Helina Mulugeta*

- Researched sound synthesis for silent videos using VQ-VAE.
- Attended a computing symposium and presented our work.

## MENTORING EXPERIENCE

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**AI Club Mentor | MSOE AI club** | Oct 2024 – Present

- Mentoring AI members on AI concepts and algorithms.
- 2025 Member's ended up creating their own CNN on their selected datasets.

**Programming Tutor | Milwaukee School of Engineering** | September 2023 – December 2023

- Working weekly with around 20 different students to explain topics and concepts in Programming.

## MORE WORK EXPERIENCE!

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**Data Science Intern | Direct Supply** | November 2023 – Present

- Experimented using tools
- **AI Product Web Scraper:** Created an AI tool to search, parse and combine unstructured data on the internet to augment the company's quality and quantity of data.
- **AI Product Linking:** Improved AI systems to match products together based on semantic similarity.
- **AI Product Tagging:** Created a System to add tags/attributes to products automatically based on product data. This data can be used to group and filter products and feed future AI Models.

## MORE PROJECTS!

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### Wordle Solver AI

[Code](#)

- Created an AI solver using Information Theory which achieves an average of 3.8 guesses per game.
- Made optimizations to allow for faster computer on mobile device.
- Created a test suite to test performance with various changes to allow fast iteration.

### Snake Game Reinforcement Learning AI

[Code](#)

- Created a Q-learning AI agent to learn to play the game achieving a high score of 140.
- Tested out ideas to improve results to such as simplifying state + action space and tuning rewards and hyperparameters

### Attempt at Large Language Model (LLM)

[Code](#)

- Implemented an LLM from scratch and trained it on a supercomputer.
- Got results which looked like English but failed to have coherent sentences due to lack of data, hardware and time.

### Retrieval-Augmented Generation (RAG) Development

[Code](#)

- Developed systems integrating retrieval and generation for AI applications.
- Used HuggingFace to download LLMs and Embedding models when building out RAG.

### Software Development Project, Helping Kids LTD

- Developed a program for storing and searching therapist client data
- Implemented login systems with hashing and MySQL Database

## CO-CURRICULAR INVOLVEMENT & VOLUNTEERING

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**Adult Scout Leader | UK Scouts** | September 2020 - June 2022

- Organized event planning meeting, activities & games and taught educational skills to 20-25 scouts.

**Tau Beta Pi Member | Tau Beta Pi** | April 2025 - Present

**AI Club Member | AI Club** | September 2022 - Present

**Scouts | UK Scouts** | 2014 - 2021

**Climber | Climbing Club** | September 2019 - Present

## AWARDS & OTHER STUFF

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**1<sup>st</sup> in NVIDIA ROSIE Supercomputer Challenge** | Milwaukee School of Engineering & NVIDIA

[LINK](#)

**Mr. MSOE 2023** | Society of Women Engineers

**6x Dean's List with High Honors Award** | Milwaukee School of Engineering

[LINK](#)

**5<sup>th</sup> in MICS Programming Competition** | Midwest Instruction and Computing Symposium

**Gold Scout Award** | Scouts

**Fundamentals of Deep Learning** | NVIDIA

[LINK](#)

**Silver Duke of Edinburg Award** | Duke of Edinburg

**A\* - Maths & A\* - Computer Science & A – Physics** | English A-Levels

## TECHNICAL SKILLS

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**Languages:** Python, SQL, Java, C#, C++, C, HTML

**Concepts:** AI, Machine Learning, Reinforcement Learning, Statistics, Exploratory Data Analysis, Agile & Scrum

**Algorithms:** Transformers, Embedding Models, PPO, Q-Learning, KNN, KMeans, SARIMA

**Technologies:** Git, Vim, LLM, RAG, AWS, Docker, Databricks, Android SDK, APIs, PyTorch, TensorFlow

**Other:** Fluent in Spanish, Learning Portuguese

## INTERESTS

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Guitar | Climbing | Puzzles | Yo-yo | Origami | Unicycle | Cooking | Gaming | Memes | Youtube