Benjamin Ledoux

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Education

Northwestern University   *Sep 2024 – Dec 2025*
MS in Computer Science, GPA: 3.78/4.0
- **Coursework:** Algorithms, Artificial Intelligence, Machine Learning, Deep Learning, DL for Natural Language Processing, Intro Parallel Computing, Agent Based Modeling, AI in Software, Software Design, Intro Networking, Intro Computer Graphics, Game Design

Connecticut College   *Sep 2020 – May 2024*
BA in Computer Science, GPA: 3.86/4.0, Cum Laude, Dean's Honors
- **Coursework:** Algorithms, Software Engineering, Computer Architecture, Data Structures, Object Oriented Programming, Discrete Math, Intro Networks, Intro Cybersecurity, Digital Sound Processing, Entertainment Software Design, Virtual Environments, Time-Based Digital Art

Experience

IT Support   *Beverly, MA*
Massachusetts Task Force 1   *June 2023 – Aug 2023*
- Recording map of entire local fiber network
- Consultation on unification of communication platforms
- Maintenance and setup of security camera network

Ammerman Scholar   *New London, CT*
Ammerman Center for Arts and Technology   *Jan 2022 – May 2024*
- Competitive certificate program
- Independent study focused on intersection of art and technology
- Developed a world generation framework for Unity (See Procedural Generation Framework under **Projects**)

Teaching Assistant   *New London, CT*
Connecticut College Computer Science Department   *Sep 2022 – May 2024*
- Tutor, grading, and coding labs for Intro, Computer Architecture, and Entertainment Software courses.
- Shared expertise with Python, C#, and Unity to guide students in assignments and projects.

Proficiencies

Technologies: AI, Machine Learning, Neural Networks, Unity
Coding: Python, C++, C#, Java

Projects

Bot Bowl Evolution ⬈
- Evolved a competitive agent for Bot Bowl ⬈ using a genetic algorithm to refine an expert system.
- Tools Used: Python, OpenAI Gym library, BotBowl library

Procedural Generation Framework ⬈
- Framework for generation of tile-based maps in Unity engine.
- Tools Used: C#, Unity

Music Box ⬈
- MP3 player with downloading, playlists, fade in/out, and other features.
- Tools Used: Python, TKinter library, yt_dlp library