Dragos Lup

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EDUCATION

 $\textbf{Georgia Institute of Technology} - BSc, Computer Science \,, GPA: 3.54/4.0$

May 2025

Stuyvesant Highschool — Highschool Diploma, GPA: 94.7/100

May 2021

WORK EXPERIENCE

Intern

May 2022 — September 2024

Medias, Romania

• Prioritized full stack development for the existing company website and database systems.

- Optimized the company website backend, creating improvements that reduced load times by 200%.
- Created an intuitive data input system that improved efficiency in team workflows.

PROJECTS

iTech Computers

Revo Zero | Godot, C# | Custom Physics-Based Video Game

January 2025

- Developed a boss rush game with a fast combat system, controlling a top in physics-based battles.
- Engineered a physics model to simulate fast motion, improving frame rate from 15fps to 90fps.
- Designed an optimized SQL database for efficient data retrieval with 35% faster updates.

Manga OCR | Python, PyTorch | Japanese Character Recognition

December 2024

- Tested ResNet, Google Tesseract and ViT models to identify Japanese Characters in manga.
- Developed an image preprocessing pipeline, extracting text bubbles, improving speed by 150%.
- Created and augmented a synthetic dataset with labeled images to enhance OCR performance.

Dansu | Python, CUDA, MMPose | Machine Learning Dancing Game

June 2024

- Play advancing game with only your web camera and body, using a pose estimation library.
- Trained a custom model on a NVIDIA GPU to massively increase frame rate from 4fps to 30fps
- Engineered a pose approximation layer to counteract delays during model inferencing.

Roll The Die | C#, Unity | Classic Roguelike Game

April 2024

- Endless video game where the player controls a dice, destroying enemies with random effects.
- Created in under 48 hours, with an easily expandable framework to be applied to future updates.
- Focused on simple concepts to get satisfying and expandable mechanics for future updates

ACTIVITIES AND AWARDS

Runner Up for GT Global Game Jam

February 2023

- Designed an evolving map and towers that changed as you played, creating diverging paths.
- Focused on clean and modular fundamentals, using data structures for easy expandability.

SKILLS

- Coursework: Procedural Content Generation, Game Development, Computer Graphics, Algorithms, Computer Vision, Artificial Intelligence, Machine Learning, Deep Learning
- Technologies: C#, GDScript, C++, JavaScript, Python, Rust, SQL, Lua, GLSL, C, Java, Swift
- Tools: React, PyTorch, NumPy, Git, Firebase, Node.js, MongoDB, Unity, Docker, OpenGL
- Languages: Romanian (Native), English (Native)