

# Dragos Lup

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## EDUCATION

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**Georgia Institute of Technology** — BSc, Computer Science , GPA: 3.54/4.0 *May 2025*

**Stuyvesant Highschool** — Highschool Diploma , GPA: 94.7/100 *May 2021*

## PROJECTS

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**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 custom 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, Tesseract and Vision Transformer 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

**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, allowing for future updates

## WORK EXPERIENCE

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**Intern** *May 2022 — September 2024*

iTech Computers *Medias, Romania*

- Prioritized full stack development for the existing company website and database systems.
- Optimized the company website back end, creating improvements that enhanced load times by 200%.
- Created an intuitive data input system that streamlined the workflow for teams, improving efficiency.

## ACTIVITIES AND AWARDS

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**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

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- **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)