





# DANY DIAB

DEVELOPER

## INFORMATION

-  Halifax, NS
-  +1 (669) 214-4841
-  danydiab04@gmail.com
-  <https://github.com/DanyDiab>

## SKILLS

### Languages

Java, C#, C, Python, JS, MySQL, Powershell

### Tools

Unity Game Engine, Git, Android Studio,  
Blender

## PROJECTS

### Dany's Terrain Sandbox

- Engineered a **procedural terrain generation** system in **Unity** using **C#**, implementing **Fractal Brownian Motion (fBm)** and **Ridge Noise** algorithms from scratch to simulate realistic mountain topography.
- Programmatically constructed **3D meshes** from noise data using the **Burst Compiler**.
- Prepared and published the project's upcoming release page on **Steam**.

### Boids Spatial Partitioning Comparison

- Developing a **Boids Simulation** in **Unity**.
- Implementing and profiling **spatial partitioning algorithms**, specifically comparing the performance of **uniform grids** and **quadtrees** to optimize neighbor search queries.

## EDUCATION

### BACHELOR OF COMPUTER SCIENCE

Dalhousie University

GPA: 3.5

2023-2027

## PROFILE

Graphics and Game Developer passionate about engine architecture and procedural generation. Experienced in engineering complex systems in **Unity** and C# using the **Burst Compiler**, including optimizing and implementing **Fractal Brownian Motion (fBm)** algorithms. Backed by professional experience in tool development and automation, with a proven ability to solve complex technical problems under tight deadlines.

## EXPERIENCE

### Upcoming Research Assistant

Dalhousie University - Supervised by Dr. Stephen Brooks

Summer 2026

- Engineering a **3D physics-based simulation** environment and **biomechanical model** using Unity and real world data to analyze right whale entanglement in fishing gear.

### Internship

Werfy - We Rent For You

Summer 2025

- Engineered a custom **SharePoint migration utility** using Python and Powershell, implementing **recursive file extraction** and a Natural Language Processing (**NLP**) script to automatically classify and reorganize unstructured company data.
- Developed and deployed **internal automation tools**, including a bulk **email drafting system** and an **attachment extraction pipeline**, significantly reducing manual administrative overhead.
- Integrated **external APIs** (CloudBeds) to automate and generate **extensive reporting** that outline key insights on company performance.

### Founder & CEO

ChimeraKeys

2022-2023

- Founded a custom mechanical keyboard business, achieving **\$5,000** in sales through hiring and managing **3** employees.