Delsther James Edralin

4th Year in Computer Science
edra-blogfolio.vercel.app
+1 672 999 1495

UBC Science Co-op

delstherjamese@gmail.com
github.com/jamesedra
linkedin.com/in/dedralin

Education

Bachelor of Computer Science — University of British Columbia | Vancouver, CA — Sep 2022 - May 2025

Bachelor of Science in Architecture — De La Salle-College of Saint Benilde | Manila, PH — Aug 2015 - May 2020

Technical Projects

Portfolio Blog — Next.js | React | Typescript | Node.js [source] [website link]

- Developed to showcase software, graphics, and design projects with details into the creative and technical processes
- Maintained a software development-focused blog, using **Nodemailer.js** to foster seamless communication with readers

3D Paddle Play Game — Unity | C# | Cg [source] [demo build]

- Developed a Pong clone in Unity to sharpen ideation and technical skills throughout the development process
- Enhanced game's visual appeal with color intensity shaders using **URP shader graphs** and reactive particle systems
- Applied advanced camera effects utilizing jostling and spring algorithms, ensuring immersive player experience

Book Marker Desktop App — Java | JUnit | JSON | JSwing [source]

- Created a desktop application for managing a personal library capable of handling **hundreds of books** efficiently
- Designed a user-friendly interface and incorporated a responsive search feature for intuitive book tracking
- Integrated optimized data persistence and event-logging functionality using JSON objects

Quadtree Pruning System — C++ | ImageMagick [source]

- Implemented an image compression algorithm by using color quantization to optimize loading times on applications
- Achieved high image processing efficiency by reducing file sizes within **19% - 84%** across multiple tested images

Graphics Projects and Simulations

Organic Fractal Simulation — Unity | C# | Cg | HLSL [source] [demo build]

- Simulated a **procedural generated**, depth-based colored, 3D "organic" Sierpinski Pyramid made in Unity URP
- Used multi-threading such as job system and **GPU instancing** to animate elements in consistent frame rates
- Addressed challenges in creating organic structures through pseudo-random algorithms such as Weyl's sequencing

Parametric Surfaces App — Unity | C# | Cg | HLSL [source] [demo build]

- Animated **11** mathematical surfaces with spatial-based coloring surface shader via shader graph and HLSL
- Overcame challenges in rendering up to **a million animated objects** with at least 60 FPS by using compute shaders

Work Experience

Architectural Technologist — D&J Builders and Power Systems Corporation — May 2020 - Aug 2022

- Created precise technical drawings in AutoCAD for industrial, medical, and government administrative facilities

Intern Architect — JVV Konsult — Sep 2019 - Dec 2019

- Prepared scaled drawings and contract documents for building contractors using AutoCAD, SketchUp and Lumion

Technical Skills

Languages: C# · HLSL · C++ · C · Cg · Java · Python · JavaScript · HTML · CSS · R
Frameworks: JSwing · JUnit · Node.js · React · Next.js · RESTful API · Tailwind
Tools and Engine: Git · IntelliJ · Visual Studio · VS Code · Valgrind · SQLite · PostgreSQL · Unity