

Daniel Pan

Work Authorization: U.S. Citizen (expected graduation Fall 2025)

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About me: denialpan.github.io/portfolio

Education

Georgia Institute of Technology

Computer Science, BS

May 2022 - Present

Atlanta, GA

Relevant Coursework: Machine Learning (CS 4641), Artificial Intelligence (CS 3600), Database Systems (CS 4400), Design and Analysis of Algorithms (CS 3510), Data Structures & Algorithms (CS 1332), Computer Organization & Programming (CS 2110), Objects and Design (CS 2340)

Skills

Languages, frameworks, and scripting: C++, C#, Python, Next.js, React.js, SQLite3, WPF, WinForms, .NET, Java, JavaFX, C, HTML5, CSS

Software, libraries, and tools: Visual Studio, Visual Studio Code, IntelliJ, Git, Raylib, Figma, Blender, [HLAE](#), MAGIX Vegas Pro 18

Professional Experience

Airline Tariff Publishing Company (ATPCO)

Software Engineer Intern

July 2024 – December 2024

Dulles, VA

- Gained experience with full-stack technologies, primarily using Angular JS for frontend development.
- Utilized NgRx for state management to maintain data consistency across the application.
- End-to-end testing with Cypress to keep UI components functional and stable after changes from company database.
- Developed new test cases for incoming data, as well as refactor existing ones to accommodate recent company changes.

Museum of Discovery and Science

Software Engineer Intern

November 2019 – May 2021

Ft. Lauderdale, FL

- Developed an augmented reality application in C to incorporate 3D models into the software.
- Utilized Autodesk Maya to model, calibrate, and animate various existing museum exhibits with Unity to sync with foreground.

Projects

iOS Tweak for Jailbroken Mobile Apple Devices | Objective-C, Logos

2021 - 2023

- Developed a feature for iOS 12 – 15 to natively cycle through wallpapers instead of just the native static one.
- Used iOS framework [Theos](#) and [headers](#) to hook onto existing classes to modify stock Apple functions.
- Vastly improved handling mobile user events and memory/cache management.
- Recently collaborated with others to add new compatibility for [rootless support](#) on new current jailbreaks.
- Created and currently hosting a repository that allows over 1700 downloads for others to install on their devices.
- View and download at <https://github.com/denialpan/DoABarrelWall>.

s4-shadowplay | React, Next.js, Svelte3, AWS S3, Tailwind CSS

2024 – Present

- Open-source file collaboration self-hosted application, using AWS S3 as the storage component.
- Features account registering and authentication with JWT tokens, with middleware and CSRF tokens for necessary security.
- SQLite3 database to handle file and folder hierarchy, file tagging, and user information/permissions.
- Extensive use of the S3 API to handle multi uploading, dynamic file chunking, and deletion, with SSE to communicate data to frontend.
- View at <https://github.com/denialpan/s4-shadowplay>

Offline Keylogger Heatmap Generation / Audio and Video Trimmer | WPF, WinForms, C#

2024 - Present

- Created a WPF program to display keyboard and mouse input as a background process.
 - Utilizes low-level hooking onto system .dlls to track user activity.
 - Analyzes mouse data to generate a 2D monitor heatmap, letting the user set the Gaussian smoothing.
 - Renders a custom keyboard and mouse diagram to display usage over time, alongside with tables.
- Created a WinForms program to make simple edits to audio and video files.
 - Batch converts MP3 files into WAV format.
 - Trims video files between timestamps set by the user, then converts to either audio or video files.
 - Options to set audio and video bitrate to change file output size.
- Beautifully organized and responsive GUIs that adheres to common Windows programs for a pleasant user experience.
- View at <https://github.com/denialpan/dankeyboard> and <https://github.com/denialpan/danverter>.

dansweeper | Raylib, C++

2025 - Present

- “Minesweeper” written completely from scratch, complete with proper tile rendering, logic, and functional player experience.
- Written to test and run custom complex solver implementations, with a goal towards finding a fast “guess-free” board generation algorithm.
- Multithreading to decouple rendering and computation, thus allowing visualization of “steps” the algorithm takes for debugging.
- Theoretically supports board generation up to 10000x10000 boards with 16-character seed generation, with frustum culling to massively reduce rendering lag
- View at <https://github.com/denialpan/dansweeper>

Java and Python Discord Bots | Python, Java, JavaFX, discord.py (Python Discord API), JDA (Java Discord API),

2019 - 2020

- Several Discord bots to play music in voice channels, send, edit, and delete messages.
- Local database to store images by type, dimensions, and keywords for sorting and retrieval of over 1000+ images.
- View at <https://github.com/denialpan/JoeBot> and <https://github.com/denialpan/danverter-music-bot/>.

3D Blender Cinematic | Blender, Half-Life Advanced Effects, MAGIX Vegas Pro 18

2019 - 2022

- Extremely familiar with Vegas Pro 18 and its various shortcuts and settings for quick navigation and a very efficient workflow. Capable of creating both simple and complex videos with appropriate amounts of VFX and SFX.
- Use of advanced custom camera tracking with [HLAE](#) to modify field-of-view, depth-of-field, timing, and curving.
- Importing, rigging, modelling, and texturing of models into Blender to create a personal distinct style of visuals and movement.
- Skills in node compositing to accentuate details, effects, and lighting to color correct renders.