Nicolás Gaffney

Richardson, TX | gaffney_nic@protonmail.com | 903 426 8827 | linkedin.com/in/n-gaffney | ngaffney.dev

Professional Summary

Passion driven computer science junior at UT Dallas with eight years of experience in various technologies such as Linux and C. Officer at OpenUTD, the on campus open source software club. Experience in teaching critical thinking and problem solving skills in a programming environment. Driven to learn and grow skills related to the computer science field while maintaining a healthy social life.

Education

University of Texas at Dallas, Bachelor of Science in Computer Science
Aug 2023 - May 2027

- **Coursework:** Computer Architecture, Programming Paradigms, Data Structures and Algorithmic Analysis, Compiler Design, OS Concepts
- **Organizations:** UTeaD Coffee and Tea Club *(Membership officer)*, OpenUTD *(President)*

Work Experience

Code Tutor, Code Ninjas – Tyler, TX
August 2022 - August 2024

- Teach students from the ages of seven to fifteen about coding through a JavaScript game development setting.
- Present STEM lessons at the public library, increasing business with tech-interested members of the community by 20%.
- Manage high-stress situations effectively maintaining professionalism under pressure while resolving disputes or conflicts among students.
- Enhance student understanding by incorporating real-world examples and hands on activities in lessons, increasing student engagement by 50%.
- Assist students in developing critical thinking skills by presenting complex challenges during sessions.

Code Tutor, iCode – Dallas, TX
August 2025 - Present

- Educate dozens of students in an after school program on a wide range of STEM related subjects.
- Summarize lessons in reports delivered to parents, increasing the likelihood of students returning by 100%.
- Give feedback to managers on lessons and how to improve the organization of educational resources.
- Deliver complex topics in an easy to understand manner to students who struggle with such topics, increasing knowledge retention by 70%.

Other Work

Work done for professor

- Created curriculum and 60 second lecture and slides for globbing in regards to a Unix shell.
- Communicated with professor on goals and preferences for the topic involved.

Projects

Physics based Particle Life Simulator | `https://github.com/nic-gaffney/particle-sim` | *On Hold*
Skills: Zig, Simulation, Graphics, Raylib, imgui, Multi-threading

- Utilized multi threading and a minimalist graphics library to simulate thousands of particles.
- Organized a configurable menu to adjust particles behaviors, creating small "organisms".
- Took advantage of Zig, an emerging technology, to prepare for the future of computer programming.

Linux Shell | `https://github.com/nic-gaffney/gftsh` | *Completed*
Skills: Zig, C, Forks, Signals, Linux

- Using the Zig build system, wrote a Linux shell in C with a number of features.
- Utilized signals to allow the shell to persist after an interrupt signal.
- Implemented globbing, allowing the use of wild cards in the shell.

Operating System | `https://github.com/nic-gaffney/gftos` | *Ongoing*
Skills: Make, C, Assembly, Cross-Compiler, Virtualization, Linker Script, Shell Scripting, Low Level Programming

- Created an operating system capable of taking keyboard input and outputting keystrokes to the framebuffer.
- Worked with the multiboot standard, gaining access to critical hardware information required for booting.
- Implemented printf for the framebuffer, allowing for easy debugging and basic programs.
- *Currently working on multiboot 2 x86_64 OS in a different repository, aiming to create a POSIX compliant OS.* `https://github.com/nic-gaffney/nyanix`

Skills

Soft Skills: Outgoing, Patient, Critical Thinking, Active Listening, Passionate learner
Technical Skills: Linux, C / C++, Python, LaTeX, Command Line, Vim, Zig, Java, Git