

Denis Fuentes

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in denis-fuentes109

Education

Expected Fall 2025 **Bachelor of Science in Computer Science**, *University of Houston*, Houston, TX
Relevant Coursework: Software Design, Fundamentals of Artificial Intelligence, Computer Networks, Operating Systems, Algorithms & Data Structures, Database Systems (SQL)

Skills

Programming C++, Python, HTML, CSS, C#, Java
Software POSIX Threads, Sockets API, PyShark, Wireshark, JSON, Network Scripting, PowerShell, Git, Makefile, CMake, SQL, MySQL, TCP/IP, Network Protocol Analysis
Concepts OOP, Data Structures, Algorithms, Network Protocols
Languages English, Spanish

Work Experience

January 2023 – Present **Trainer**, *Compudopt*
○ Taught 150+ students foundational skills in C++, Python, and front-end development through project-based learning.
○ Collaborated with a team of 40+ to plan, and execute projects and coding workshops.
○ Contributed to serving over 17,000 students, distributing 16,520 devices, and delivering 46,000+ hours of learning.

Project Experience

Dec 2024 **Network Client-Server Program (C++)**
○ Developed a client-server model for interprocess communication using UNIX sockets.
○ Utilized multithreading for the client to handle multiple connections efficiently.
○ Enhanced server performance by managing concurrent requests using child processes.
Nov 2024 **IP Address Pinning and Monitoring Tool (Python)**
○ Designed a Python tool for real-time network diagnostics and IP monitoring.
○ Implemented robust error handling and logging to track network performance and identify connection issues.
○ Optimized code for efficient processing of multiple IP addresses, ensuring reliable performance in dynamic network conditions.
Oct 2024 **Shannon Coding Algorithm (C++)**
○ Implemented a data compression algorithm using POSIX threads to enhance processing efficiency.
○ Designed the program to calculate symbol frequencies, generate Shannon codes, and encode messages.
○ Applied multithreading techniques to improve performance in handling large datasets.

Activities

2023 – Present **Code[Coogs]**
○ Active member contributing to coding projects and participating in competitions.
○ Collaborated with peers to develop software solutions in hackathons and workshops.