ASAAD AL BARWANI

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EDUCATION

New York University - Bachelors of Arts, Computer Science & Linguistics   2022 - 2026
- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming in C++, Computer Systems Organisation, Discrete Math, Mechanics.

LANGUAGES, DEVELOPER TOOLS, AND SKILLS

C++ / C / C#, Bash, Shell, Java, Python, GDScript, Assembly, Git, Godot Engine, RHEL, Wireshark, Docker, Singularity.

EXPERIENCE & PROJECTS

Team Captain & Finalist | SC23 Student Cluster Competition   **Nov 2023**

HPC Cluster Competition   Bash | Wireshark | Python
- Led NYU's first SCC finalist team as captain.
- Responsible for MLPerf benchmark, network security, Mystery Application (CTF), Reproducibility Report, and team management.
- Required knowledge of Python CM scripts, Bash scripting, networking and security, Wireshark, Computer/HPC architecture, Docker & Singularity Images, and Linear Algebra.

CSAW CTF 2023 Challenge Writer | 'Impossibrawler!' & 'Rapid Cosmic Extermination!'   Aug 2023 - Nov 2023

CTF Game Challenges   Godot Engine | Git | Python
- Developed two game challenges for the CSAW CTF qualifying and final rounds.
- Impossibrawler - Game made with intentional flaws that the players would have to reverse engineer to fix and make winnable.
  - Played by nearly 4400 competitors from over 1800 different teams globally, garnering 180 solves.
- Rapid Cosmic Extermination - Game involving a leaderboard with insecure networking, allowing players to inject bash commands to parse through private game files and retrieve flag.
  - Played by hundreds of competitors from over 50 different teams globally, garnering 6 solves.

Lead Software & Electrical Engineer | 'Air Guitar' - (un)Stringed Instruments   **Sept 2022 - Dec 2022**

Capacitive Touch Sensor-based MIDI Guitar   C++ | Arduino | Electronics
- Produced a fully functioning MIDI Guitar which utilises Capacitive Touch Sensor technology and the Arduino UNO to output MIDI data to a DAW.
- Developed all software to process analogue input from sensors and convert the input into a MIDI signal that can be processed by DAW software.
- Presented functioning prototype at a highly selective showcase within the university.

Lead Engineer, Project Manager | 'Kalindis' - Nahar Studios Mobile Game   **Oct 2021 - Apr 2022**

Infinite Scrolling Mobile Game   Godot Engine | Git | HTTP
- Developed all in-engine features for Nahar Studios' first large scale commercial project.
- An infinite scroller mobile game with complete physics, professional visuals, clean UI/HUD implementation, procedural level generation, particles, and in a later update, a comprehensive leaderboard system.
- Led a team of 12 at Nahar Studios as Project Manager and Lead Engineer.
- Published game to Google Play Store after 6 months of development, currently sitting at 4.9 stars.

IT Helpdesk Asisstant | NYU Stern School of Business IT   **Dec 2022 - Present**

University IT Department   Troubleshooting | User support | IT
- Assisting full-time IT staff with general IT duties, supporting users with ranging levels of technical knowledge.