

Hu Bowen

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ABOUT ME

Passionate cybersecurity student in Ngee Ann Polytechnic specializing in software development and web exploitation. Self-motivated learner dedicated to pushing boundaries in the cybersecurity field, driven by a constant thirst for knowledge in the ever-evolving cybersecurity landscape.

EDUCATION

Ngee Ann Polytechnic

Apr. 2023 – Present

Diploma in Cybersecurity & Digital Forensics

- cGPA: 4.00
- DSTA Polytechnic Digital Scholar
- NullSec (Cybersecurity Interest Group) Exco. Wrote a vulnerable web app to teach pentesting. Authored challenges for inter-poly CTF, Lag & Crash.
- Participated in numerous CTFs, notably TISC 2023, PatriotCTF 2023 and Hack@AC 2024

PROJECTS & EXPERIENCE

SimpleOS

May. 2022 – Jun. 2022

- Bare metal operating system written in Assembly and C
- Learnt a lot about how operating systems worked under the hood, such as interrupts, filesystems, memory paging, and hardware such as the programmable interval timer.
- Implemented a basic shell and a fully functioning snake game. All functions were custom written, none were linked against libc.

BB84 Chat Application

Jan. 2024

- Chat application that uses the BB84 quantum key distribution protocol to generate keys.
- Simulated qubits using NumPy and designed a custom networking protocol for qubit transmission.

Canteen Queue Estimator

Jun. 2022

- AI application to count the number of people in the school canteen. Data is displayed on a Flask webserver which can be accessed by anyone throughout the school.
- Uses YoloV5 crowdhuman, a fine-tuned model of YoloV5 to detect human heads in the queue.

Track It

Feb 2024 – Present

- A collaborative to-do tracker written with React and Next.JS. Uses Supabase for the backend database.
- Mastered CI/CD concepts along and gained experience in managing production databases.

Hack The Box

Jun. 2021 – Present

- Avid player of HTB, owned multiple boxes in my free time.
- Wrote custom exploitation scripts for some boxes to learn bash scripting.

ACHIEVEMENTS & SKILLS

- **Achievements:** TISC'23 Level 6 Completion; Certificate of Participation in NOI 2022; YCEP 2021 Finalist
- **Skills:** Various programming languages (Python, Rust, C++, React); Familiarity with Linux (Pop! OS, Kali, RedHat Enterprise); Teamwork; Leadership