

# Uzen Huang

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Computer Science student exploring new platforms of computation

## Experience

### Internship

*Tencent Security Xuanwu Lab*

 Jul 2023 — Aug 2023  Beijing, CN

Xuanwu Lab is a cybersecurity lab that focuses on finding vulnerabilities in a range of platforms.

- Worked on finetuning a Large Language Model (LLM) for general security tasks such as vulnerability analysis
- Researched attack and defense methods for LLM models on security threats such as prompt injection and prompt leaking
- Wrote a LLM powered group chat backend in python as a target

### Tencent Spark Program

 2021 — 2023  Shenzhen/Beijing, CN

Tencent Spark Program is a selective, hands-on summer camp that provides technical experiences to high school students. The yearly event is week long, hosted over summer break.

- Participated in Tencent Spark Program on the cyber security path as a student in 2021
- Joined as a peer mentors in 2023 for the cyber security path, and a student for the AI Vision path
- Participated in organizing the AI Security path in 2023

### DEF CON CTF 2023

*P1G BuT S4D*

 Aug 2023  Remote

DEF CON CTF is an internationally renowned Capture The Flag (cybersecurity competition) event where selected teams participate over 3 days to solve difficult puzzles.

- Participated in *DEF CON CTF 2023* as a member of *P1G BuT S4D*
- Continues to participate in CTFs with *r3kapig*

## Education

### Higher Level

*University of Wisconsin Madison*

 Sep 2022 — May 2026  Wisconsin, US

- Sophomore student working towards a B.S in Computer Science (In Progress).
- Cumulative GPA of 3.7/4.0

## Interests

- NeoVim/Exploring different flavors of Linux (*dotfiles*)
- Cyber Security and Natural Language Processing
- Hypervisors and Containers
- Networking with Tailscale
- Computer hardware and building systems

## Projects

### Homelab

- Hosted various service across geological regions on cloud services and on-premise bare metal servers
- Using Proxmox VE hypervisor and Docker to host Nextcloud, Mail, Game Servers, and other services
- Adept at storage technology with RAID, ZFS, and SMB
- Familiar with Ubuntu and RHEL based operating systems
- Experienced with networking, reverse proxying, remote accessing services via Tailscale, Wireguard and Caddy
- Familiar DNS for domain resolution
- Managed backup and recovery of services with snapshot management via Proxmox Backup Server

### Mangascribe

- Work in progress manager for manga written in Go
- Supports expansion to multiple difference sources for download APIs
- Uses Gorm (ORM) and Sqlite for storing metadata in database
- Leverages Gin for a RESTful API endpoint
- Employs API keys and session tokens for authentication

### Keyboard Design

- Designed and manufactured *MacroCat*, a 3D printed macropad
- Case designed using OpenScad, a 3D modeling programming language
- Assembled and modified *crkbd* with ZMK to support bluetooth

### LLM Research

- Worked on a collection of attack vectors for Large Language Models

### Bad Apple TTY

- A simple terminal video player written in Go
- Uses ANSI escape codes to display video frames processed with OpenCV
- Optimized for low latency and allows frameskipping for slow terminals

### Web Notes

- High school project to provide IB DP study notes hosted via Jekyll on GitHub Pages
- Written in markdown, html, and KaTeX

## Skills

- Experienced with Linux system administration
- Experienced with Docker, Proxmox, Caddy, Wireguard, Tailscale
- Familiar with Python, Go, Java, Bash, C
- Familiar with common Unix tools such as Vim, SSH, Grep, Sed, etc.
- Novice in databases such as MongoDB, Sqlite, and Cassandra
- Learning streaming frameworks such as Kafka