Yuki **Kume**

UNIVERSITY STUDENT · INDEPENDENT DEVELOPER

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Student developer with 7 years of experience in software and web development - a curiosity monster who loves touching and experimenting with new technologies and implementing them in practice. Take a masochistic delight in challenging self to expand the area of expertise and deepen the skills. My current topic of interest and my aspiring research topic is the unity of Deep Learning and Cyber-security

Education

Monash University   *Melbourne, Australia*
BACHELOR OF COMPUTER SCIENCE ADVANCED (HONOURS)   *Feb. 2022 - Present*
- Currently pursing (First year)
- Majoring in Computer Networks and Security
- Committee Member [Member Training Officer] at MonSec (Monash University Cybersecurity Club)
- Anticipated graduation: Dec 2025

Dulwich College Suzhou   *Suzhou, China*
INTERNATIONAL BACCALAUREATE   *Sep. 2013 - Jun. 2021*
- Completed International Baccalaureate diploma
- Media Prefect (2020-2021)

Experience

Research Assistant (C# Programmer)   *Remote, Australia*
MONASH UNIVERSITY CYBERSECURITY RESEARCH GROUP & THE LEGION OF THE BOUNCY CASTLE INC.   *Apr. 2022 - Present*
- Developing a .NET class library for a post-quantum lattice-based public-key cryptography algorithm to add to the Bouncy Castle library
- Currently assigned/developing the C# implementation of NIST PQC Round 3 NTRU Prime/NTRU algorithms from C reference implementations
- Using C#, .NET Framework 2.0

Skills

DevOps	Docker, Kubernetes, Git, Prometheus, Travis CI, GitHub CI/CD/Actions
Programming	C++, Rust, Python, Java, PHP, JavaScript, Node.js, C# | DB: MySQL, PostgreSQL, SQLite, MongoDB, Redis
Operating Systems	Fedora, Kali Linux, Ubuntu, macOS, Windows 10, CentOS, OpenSUSE

Activities

2022 Apr	**Workshop Leader,** MonSec XXE Web Exploit Workshop	*MonSec*
2022 Apr	**Plaid CTF 2022 (Solo),** Web Exploitation	*Plaid CTF, Online*
2022 Apr	**RITSEC CTF 2022 (Team),** Web Exploitation, Binary Exploitation, Cryptography	*RITSEC CTF, Online*
2022 Apr	**UMassCTF 2022 (Team),** Web Exploitation	*UMass CTF, Online*
2022 Mar	**MonSec CTF (Team),** Web Exploitation, Binary Exploitation, Cryptography, Forensics, OSINT	*MonSec, Monash University, Australia*
2022 Mar	**picoCTF (Solo),** Cryptography, Reverse Engineering, Binary Exploitation, Web Exploitation, Forensics	*picoCTF, Online*
2022 Feb	**Participant,** UNIHACK Hackathon, Project: Decentralised Social Media	*Australia, Melbourne*
2020-2021	**Prefect,** Duwich College Suzhou - Media Prefect	*China*
2018	**Staff/Workshop leader/teacher,** Dulwich College Suzhou Hackathon - Python workshop	*China*
2018	**Participant,** Dulwich College Shanghai Hackathon	*China*
2017-2020	**Web Developer | Server Administrator,** Elegant365 Project	*China*
2017	**Participant,** GTE entrepreneurship camp/competition	*Japan*

Honors & Awards

2022	**Black Hat Asia 2022 Student Scholarship (SGD $799),** Black Hat	*Singapore/Online*
2021	**International Study Grant (AUD $10,000),** Monash University Scholarship	*Monash University*

Projects

finman

C++   *Jan. 2022 - PRESENT*

- Command-line finance manager built using C++
- Uses SQLite as a database

Sequence Analyser

C   *Jan. 2022 - PRESENT*

- Simple and fast Sequence analysis tool (DNA/RNA) based on Aho-Corasick algorithm
- Inputs a sequence and a pattern, outputs the number of occurrences of the pattern in the sequence

UnciaNet

NodeJS, Javascript, Redis   *Dec. 2021 - PRESENT*

- Fully featured Blockchain network with NodeJS and Redis backend
- NodeJS REST API made for creating transactions, Redis Pub/Sub for announcing blocks
- Currently under development to transform into blockchain visualisation/learning tool

KeySort

Rust   *Nov. 2021 - PRESENT*

- Small command-line utility to sort files and folders into character assigned folders
- Built efficiently with Rust

EqManage

PHP, HTML, CSS, Javascript, MySQL   *Oct. 2019 - Jan. 2021*

- Client: Dulwich College Suzhou
- Equipment (Renting) management system
- Users can rent equipment, set renting period + message. Admins can approve or deny the request. Includes dashboard, overdue tracking etc...
- DB: MySQL | Backend: PHP + JavaScript

cocoon

POEdit, PHP, CSS, Javascript, HTML   *Oct 2021 - Present*

- Pull request contribution to opensource project: yhira/cocoon
- SEO optimised WordPress theme
- Mainly contributed the translation that was then pushed to the official branch in the main repository
- Few tweaks made to the theme for personal use

Tower defense game

C# (Unity), Cinema 4D   *Jan. 2018*

- Tower Defense Game built using Unity
- Single player game, where the player defends endpoint from incoming enemies. All elements including the tower design were solo developed

Chatbox

PHP, MySQL, HTML, CSS, Javascript   *Jul. 2016*

- Chatroom where multiple users can chat with each other, with online status, and chat history. Similar to Discord

Certifications

2022 Feb   **Cybersecurity Fundamentals**, No expiration date

2022 Feb   **NSE 1 Network Security Associate**, Expires Feb 2024

Personal Interests

Personal Server

Docker, Kubernetes, Server Administration   *2018 - PRESENT*

- Hosting services on both VPS (Vultr & Hetzner) and personal server using Docker and orchestrated using Kubernetes
- Reverse proxy, SSL certificate, intrusion detection, access control, and other basic networking security/configuration applied