

# Yanyu Zhang

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github.com/yanyu-zhang

## TECHNICAL SKILLS

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- **Programming Languages:** C/C++, Python, Java, TypeScript/JavaScript, Rust, Erlang, Cuda
- **Technologies & Frameworks:** PostgreSQL, Redis, Jenkins, AWS, Docker, OAuth, Git
- **Knowledge & Skills:** Linux Kernel, Embedded Systems, Linux Driver, Computer Networking, Distributed Systems

## WORKING EXPERIENCES

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- **Sierra Wireless** Richmond, BC  
*Embedded Software Engineer* Jan 2022 - Aug 2022
  - Developed crucial Wi-Fi features for IoT devices in **C++**, including the ability to switch between 2.4GHz/5GHz, compatibility support with various security protocols and implementation of unique functionalities
  - Offered Board Support Package (BSP) assistance using **C** to integrate additional features into the U-Boot bootloader for Sierra's custom **Yocto Linux** distribution
  - Achieved the consistent delivery of high-quality code and prevented regression through the use of **Jenkins** for testing in conjunction with **GitHub**
  - Automated the process of identifying manufacturing failures through **Python** and **Lua** scripts
- **University of British Columbia** Vancouver, BC  
*Teaching Assistant for third-year Computer Networking course* Jan 2022 - Present
  - Provided support to over 300 students by answering questions on Piazza, assisting with programming assignments, coordinating with the instructor, holding weekly tutorials and office hours during the academic term
  - Created and implemented instructional materials, including tutorials and quizzes, to supplement course content and enhance student learning

## EDUCATION

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- **University of British Columbia** Vancouver, BC  
*Bachelor of Science Major in Computer Science* Sep 2020 - May 2023
- **University of Alberta** Edmonton, AB  
*Bachelor of Science Honors Major in Computer Science* Sep 2018 - May 2020

## PROJECTS

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- **Blobfish OS** [Course Project—[Barrelfish](#)]  
*An Operating System supports ARMv8 architecture based on Barrelfish OS* Sep 2022 - Dec 2022
  - Developed an OS as a team of four students, implemented fundamental components using **C** and **ARM** Assembly
  - Implemented advanced resource management capabilities, including paging, memory management, threads synchronization, multi-process management, inter-process communication, and multi-core support
  - Incorporated a network stack that supports ARP, ICMP, UDP, and TCP network protocols
  - Successfully conducted performance optimization on NXP Toradex Colibri iMX8X hardware through thorough testing and benchmarking
- **Wavy** [Personal Project—[Link](#)]  
*A Dedicated Mobile Social Platform for UBC Students* Mar 2022 - Aug 2022
  - Collaborated with a team of 10+ students from diverse backgrounds to develop a mobile app that allowed students to post events, follow their peers, and connect with new people
  - Developed a **TypeScript** based ticket payment micro-service by integrating **Stripe** payment solution into Wavy's backend API, and offered support for client-side payments.
  - Automated testing process using Python's Multi-thread module, capable of handling 1000 requests per second
  - Dockerized the deployment process onto AWS EC2 instance, breaking down the Redis and backend logic into micro-services and maintaining them through Docker containers for easy addition of new features