

Muratov Ali

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EDUCATION

City University of Hong Kong

Sep. 2022 - May 2026

Bachelor of Science in Computer Science, CGPA: 4.1 / 4.3 (currently within top 2% range)

EXPERIENCE

Software Engineering Intern

June 2025 - Present

Kodifly

Hong Kong SAR

- Co-developed a C++/Qt5 desktop control app with one-click start/stop of drivers SLAM, embedded RViz camera/LiDAR views, topic-selective rosbag recording, and live rate/health diagnostics for a handheld 3D SLAM scanner ([GitHub](#));
- Configured PTP (Precision Time Protocol) sync to align camera and LiDAR timestamps for reliable sensor fusion;
- Developed ROS1/ROS2 nodes to integrate sensors and controls;
- Implemented a Python point-cloud tool to estimate pothole depth, area, and volume (plane fit + segmentation).

Undergraduate Technical Assistant

July 2024 - May 2025

City University of Hong Kong, Department of Computer Science

Hong Kong SAR

- Automated CARLA workflows with Python scripts, standardizing scenario generation and data conversions;
- Built and debugged CARLA on Windows/Ubuntu; resolved autobuild failures by pinning dependencies and fixing configs;
- Integrated Open3DHK (FBX) assets into CARLA/RoadRunner with textures; diagnosed invisible collision bugs and improved drivability;
- Reviewed and synthesized 30+ HMI testing papers.

Teaching Assistant

Sep. 2023 - May 2024

City University of Hong Kong, Department of Computer Science

Hong Kong SAR

- CS2204 & CS2310 — Guided students by answering questions via email and supporting them during lab sessions.

PROJECTS

Linux Kernel Extensions for Process Scheduling and IPC | *Linux, C, QEMU, GCC*

Apr. 2024

- Developed a priority-based process scheduler for a simple Linux-based operating system kernel (basekernel) to manage and coordinate the execution of multiple processes.
- Implemented inter-process communication (IPC) using named pipes, enabling data exchange between processes in a unidirectional, sequential manner within a Linux environment.
- Tested and validated the functionality of the scheduler and named pipes through custom user-level programs, ensuring correct process scheduling and IPC behavior on Linux.

Obsidian Swiper plugin | *Obsidian API, TypeScript, Svelte, SwiperJS, CSS, Git*

Jan. 2024

- Successfully integrated SwiperJS into Obsidian note-taking application to develop a slider plugin, using the Obsidian API for effective manipulation of Markdown documents within the Obsidian Editor.
- Utilized the SwiperJS library to implement a customizable slider functionality, enhancing user interactivity within the Obsidian platform.

ACADEMIC ACHIEVEMENTS

- CityU Top Scholarship for International Students (180,000 HKD per annum)
- College of Computing Dean's Scholarships 2024/2025 (5,000 HKD)
- CityHack 2023 Most Creative Award

TECHNICAL SKILLS

Languages: C++, Python, Java, SQL (MySQL), JavaScript, HTML/CSS

Frameworks: Qt5, React, Svelte, NodeJS, Express, Axios, Bootstrap, ROS1/ROS2

Developer Tools: Git, Docker, CMake