Muratov Ali

ali.muratov.0325@gmail.com | linkedin | github | leetcode

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 scannner ([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

This is a copy of an online display of the student's grades for reference. Grades shown at the time of viewing may not be the definitive version of the student's final academic record. Only the Academic Transcript issued by the University constitutes the official student record.

Student Name : MURATOV Ali
Student Number : 57317500
Level : Bachelor's Degree

Degree : Bachelor of Science
Major : Computer Science

INSTITUTION CREDIT

Course Code	Course Title	Credits	Grade	Remarks
Semester A 2022/23				

Status: Enrolled
Major: Computer Science

Course Code	Course Title	Credits	Grade	Remarks
CS1302	Introduction to Computer Programming	3	A+	
GE1401	University English	3	A-	
JC2066	IT Professionals: Ethical, Legal and Social Issues	3	A+	
MA1200	Calculus and Basic Linear Algebra I	3	A+	
PED1305	Physical Fitness - Elementary	0	P	
PHY1201	General Physics I	3	A+	

Earned Hours: 15.00   **GPA Hours:** 15.00   **Points:** 62.70   **GPA:** 4.18

Awarded Dean's List

Semester B 2022/23

Status: Enrolled
Major: Computer Science

Course Code	Course Title	Credits	Grade	Remarks
CS2204	Fundamentals of Internet Applications Development	3	A+	
CS2310	Computer Programming	3	A	
CS2402	Introduction to Computational Probability Modeling	3	A	
GE2260	Introduction to Finance	3	A+	
GE2410	English for Engineering	3	B+	
MA1201	Calculus and Basic Linear Algebra II	3	A+	

Earned Hours: 18.00   **GPA Hours:** 18.00   **Points:** 72.60   **GPA:** 4.03

Awarded Dean's List

Semester A 2023/24

Status: Enrolled
Major: Computer Science

Course Code	Course Title	Credits	Grade	Remarks
CS2115	Computer Organization	3	A	
CS2312	Problem Solving and Programming	3	A	
CS2611	Seminars on Contemporary Technology I	1	IP	
CS3201	Computer Networks	3	A+	
CS3334	Data Structures	3	A+	
MA2185	Discrete Mathematics	3	A-	

Earned Hours: 15.00   **GPA Hours:** 15.00   **Points:** 60.90   **GPA:** 4.06

Awarded Dean's List

Semester B 2023/24

Status: Enrolled

Major: Computer Science

CS2611	Seminars on Contemporary Technology I	1	P
CS3103	Operating Systems	3	A+
CS3342	Software Design	3	A
CS3402	Database Systems	3	A
CS3481	Fundamentals of Data Science	3	A
GE2262	Business Statistics	3	A+

Earned Hours: 16.00 **GPA Hours:** 15.00 **Points:** 61.80 **GPA:** 4.12

Awarded Dean's List

Summer 2024

Status: Enrolled

Major: Computer Science

GE2324	The Art and Science of Data	3	A

Earned Hours: 3.00 **GPA Hours:** 3.00 **Points:** 12.00 **GPA:** 4.00

Semester A 2024/25

Status: Enrolled

Major: Computer Science

CS3343	Software Engineering Practice	3	A
CS3504	IT Professional Placement	12	IP
CS4335	Design and Analysis of Algorithms	3	A

Earned Hours: 6.00 **GPA Hours:** 6.00 **Points:** 24.00 **GPA:** 4.00

Semester B 2024/25

Status: Enrolled

Major: Computer Science

CB2100	Introduction to Financial Accounting	3	A+
CS3504	IT Professional Placement	12	P
CS4286	Internet Security and e-Commerce Protocols	3	A+

Earned Hours: 18.00 **GPA Hours:** 6.00 **Points:** 25.80 **GPA:** 4.30

Awarded Dean's List

Semester A 2025/26

Status: Enrolled

Major: Computer Science

CS4480	Data-Intensive Computing	3	In Progress
CS4514	Project	3	In Progress
EN4262	English Communication Skills for Computing	2	In Progress
GE1305	Foundation Physics	3	In Progress
GE2340	Artificial Intelligence – Past, Present, and Future	3	In Progress
MA2172	Applied Statistics for Sciences and Engineering	3	In Progress

In Progress Credits: 17.00

Maximum Credit Units Permitted: 144
Total Credit Units Completed: 91

	Earned Hrs	GPA Hrs	Points	GPA
Total Institution	91.00	78.00	319.80	4.10
Total Transfer	0.00	0.00	0.00	0.00
Overall	91.00	78.00	319.80	4.10