Charles Joshua T. Uy

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Education

Ateneo de Manila University — Loyola Heights, Quezon City
BS Computer Science — *2024 – Present*
- Director's Lister — First Honors
- Fr. Bienvenido F. Nebres, SJ Science Academic Scholar

The Hong Kong University of Science and Technology (HKUST) — Hong Kong
Exchange Student (one semester) — *2026 - Present*

Philippine Science High School — Eastern Visayas Campus — Palo, Leyte
Core Science (Advanced Physics) | Math Level 2 (Advanced) — *2018 – 2024*
- Graduated With High Honors; ranked 2.5 of 88; G12 GWA 1.07/5 (97.68/100)
- Director's Lister for 20 consecutive quarters (Grade 8 through Grade 12)
- PHINMA Academic Excellence Award; Excellence Awards in Mathematics, Computer Science, and Research
- Computer Science Elective (G11) & Engineering Elective (G12); SAT 1480 (Math 780, English 700)

International Honors & Awards

International Young Researchers Tournament *international research competition* — Gold Award 2024

13th Regional Congress, SEAMEO Search for Young Scientists (SSYS) *SE-Asian research competition* — Finalist 2024

Hong Kong International Computing Olympiad (HKICO), Final Round *international CS olympiad* — Gold Medal 2023

International Mathematics Wizard Challenge (IMWiC) *SE-Asian math contest* — Silver Medal 2023

Global Gifted Problem Solving Camp *int'l robotics camp, Gimje, S. Korea* — Leadership Award 2023

International Kangaroo Mathematics Competition — Bronze Award 2021

Hua Luogeng Golden Cup Mathematics Invitational *one of China's toughest contests* — Bronze Award 2019

International Math Open for Young Achievers (IMOYA), Singapore — Silver (Individual & Group) 2017

International Teenagers Mathematics Olympiad (ITMO), National Parallel — Silver Award 2017

VANDA International Science Competition — Bronze Award 2017

International Mathematics Wizard Challenge (IMWiC) *SE-Asian math contest* — Bronze Medal 2016

Australian Mathematics Competition (AMC) — Certificate of Distinction 2015

World Math Invitational, Taiwan — Merit 2014

National Honors & Awards

2nd KPMG Academic Innovation Challenge *R.G. Manabat & Co. (KPMG Philippines), with Microsoft & MAP — Team Luzon Visayas Mindanao, 100+ teams* — 3rd Place 2026

Start Up QC Squad 3 *Quezon City startup accelerator competition (ongoing)* — Finalist 2026

Blue Hacks 2026 *24-hour hackathon, Ateneo de Manila University* — 2nd Runner-Up 2026

HACKFEST 2026: AXIS *10-day hackathon, ADMU Google Developers Group* — 2nd Runner-Up 2026

Hacker Cup 2025 *2-day hackathon, De La Salle University* — 2nd Runner-Up 2025

Blue Hacks 2025 *24-hour hackathon, Ateneo de Manila University* — Top 10 Finisher 2025

Ateneo College Entrance Test (ACET) *top 200 of 10,000+ applicants* — Director's Lister 2024

7th IMake.WeMake: Create. Innovate. Collaborate *national makers competition, DOST-SEI* — Finalist (Top 20) 2024

DOST Youth Excellence in Science (YES) Award *national STEM achievement award* — Awardee 2023

2nd Ateneo Physics Olympiad: Entanglement (APhO) *national physics olympiad* — Finalist 2023

Philippine Online Physics Olympiad (PhO2) *national physics olympiad* — Silver Medal 2023

DOST-SEI 6th Indie-Siyensya (Youth Category) *national science short-film contest* — 3rd Place 2023

25th SquEEEze: National EEE HS Competition & Convention *electronics & electrical engineering* — 1st Runner-Up 2023

Laban ng mga Maharlika Science Camp *national group science camp* — 1st Place 2021

Pakaritay *regional science quiz bee* — 1st Place 2021

Metrobank-MTAP-DepEd Math Challenge *regional math competition* — Top Scorer 2018

DOST Youth Excellence in Science (YES) Award *national STEM achievement award* — Awardee 2017

DOST Youth Excellence in Science (YES) Award *national STEM achievement award* — Awardee 2016

National Parallel Challenge for Future Mathematicians — Silver Medal 2016

UNIVERSITY AWARDS

HKUST 35th Anniversary Sports Day – Soaring Dragon Boat Regatta *Trophy Challenge; drummer and paddler* — Champion 2026

The GUIDON — 2nd Manuel Colayco Awards *Outstanding Interactive Award, for A Long Walk Back* — Winner 2026

The GUIDON — 2nd Manuel Colayco Awards *Rising Guidoneer Award (top first-year staffer)* — Finalist 2026

Cyber Flag Rush (CYFR) *school-wide CTF (cryptography, digital forensics), CompSAt, 20+ teams — Team Cicada Too* — 2nd Runner-Up 2025

LEADERSHIP

ARSA Seniors' Send-Off 2026 — 2026
Secretariat Head. Annual dorm event sending off 100+ graduating seniors.

ARSAFEST SIDLAK 2026 — 2026
Secretariat Head. Annual dorm event celebrating the diverse people and culture of the Ateneo dorms.

ARSA Year-End Party 2025 — 2025
Materials & Decorations Head. Official dorm student event with 300+ attendees.

Pisay Math Circle — 2023 – 2024
President, Internal Affairs. Led the official PSHS-EVC math club and organized a region-wide math competition.

Batch of 88–90 Students (G10, G12) 2021 – 2024
President. Led batch-wide activities, events, and fundraisers.

Class of 30 Students (G7, G8, G11) 2018 – 2023
President. Led class activities and yearly community outreaches.

Athletic Council 2021 – 2022
President. Organized the annual school SportsFest for 500+ students.

EXPERIENCE

Surtix June - August 2026
QA Automation Developer *Singapore (Remote)*
- Built an automated end-to-end UI testing framework using Playwright and Python for a Singapore-based company
- Automated user workflows, including account creation, to catch UI issues beyond unit-test coverage

AKIVA Holdings Inc. 2025 – Present
Freelance Software Developer & Team Lead *Philippines*
- Lead a development team building custom software that automates clients' legacy systems
- Lead developer of Agila, a centralized web app digitizing company-wide requests, forms, and approval workflows

Ateneo Residents Student Association (ARSA) 2025 – Present
Deputy for Web Development *2026 - Present*
- Head ARSA Portal, a new branch under the Department of Administration, with a dedicated focus on developing the association's website

Deputy for Administration & Lead Developer *2025 - 2026*
- Led website development for the ARSA Digital Ecosystem: a self-hosted hub with a custom URL shortener, event ticketing, admin panels, and an e-commerce shop
- Built an automated GCash OCR receipt-verification system; the shop has processed PHP 250,000+ in total revenue
- Handled administrative work, including masterfiles and cross-departmental systems, and served as Secretariat Head for ARSA Seniors' Send-Off 2026

The Guidon 2025 – Present
Digital Development Staffer *Ateneo de Manila University*
- Develop web-based interactives for the university's official student publication
- Project lead for A Long Walk Back, a 3D interactive on the 1986 EDSA People Power Revolution — winner, Outstanding Interactive Award, 2nd Manuel Colayco Awards

Computer Society of the Ateneo (CompSAt) 2024 – Present
Developer & Learn2Dev Mentor *Ateneo de Manila University*
- Build web-based projects for clients and student communities
- Mentor and module writer for Learn2Dev: taught and authored modules on modern full-stack web development

Ateneo CODE 2025 – Present
Member — Consultants for Organization Development & Empowerment *Ateneo de Manila University*
- Provide organizational-development consulting for youth-led organizations to support youth empowerment
- Building CODE Portal, the org's internal digital infrastructure platform

Nissan Tacloban (Palo, Leyte) 2021
Data Entry Intern *Palo, Leyte*
- One-month internship digitizing and organizing dealership records and customer data for TopCars Autoworld Corporation's Nissan Tacloban branch

PROJECTS

YAT.LIFESTYLE 2026 – Present
Sole Developer. Built the trilingual website and AI personalization experience for a Hong Kong perfume startup, combining brand storytelling, fragrance discovery, and customer scent profiles with React, TypeScript, and Cloudflare Workers, D1, R2, and Vectorize.

Element 2026
Sole Developer – Hong Kong AI Summit: BUILD ACROSS Hackathon. AI-assisted perfume personalization prototype for YAT.LIFESTYLE, combining guided sampling, scent preferences, and recommendations for perfumer review. Trained ridge-regression and clustering models on olfactory ratings from 55 participants across 480 molecules.

rewAInd 2026
Developer – Hong Kong AI Summit: BUILD ACROSS Hackathon. AI-assisted insurance prototype exploring sponsor-funded device protection established before an accident. Built an interactive recovery demo and a Cloudflare Workers AI evidence desk that extracts source-linked facts from receipts and repair quotes for user-reviewed recovery drafts.

Atelier 2026 – Present
Personal portfolio. An Astro 6 site on Cloudflare Workers combining Svelte, React, Vue, Canvas 2D, and Tailwind into a distinctive ink-on-paper editorial system, centered on a scroll-driven 56×40 generative grid that morphs between identity states — portrait, web, waveform, banig weave, blueprint.

Ally 2026 – Present
Developer. AI-powered study companion: parses uploaded syllabi into deadlines, exams, and weak spots, then plans and adapts study blocks through a calendar/task dashboard, a chat assistant, and a focus assistant that blocks distractions and negotiates breaks — with a mobile companion for session alerts.

Meera 2026
Developer. AI-powered desktop support assistant pairing a Next.js/React web app with an Electron overlay client for real-time, screen-aware guidance — click-through cursors, arrows, highlights, and chat bubbles rendered over other apps, backed by secure Groq AI routes, validated tool calls, support-ticket workflows, and Drizzle/Cloudflare D1.

Game of the Generals Online 2026
Lead Developer. Next.js/Cloudflare web app bringing the Filipino strategy classic Salpakan into a chess-platform-style experience: hidden-piece gameplay, legal move handling, battle resolution, guest play, pass-and-play, solo practice, private room codes, real-time room sync, chat, and move history.

ARSA Digital Ecosystem 2025 – Present
Lead Developer. Centralized association hub: custom URL shortener, event + ticketing, admin panels, and an e-commerce shop with automated GCash OCR receipt verification (PHP 250,000+ revenue).

Harbor PH 2025 – Present
Lead Developer. Nationwide event platform centralizing discovery and ticketing for diverse gatherings.

Agila 2025 – Present
Lead Developer. Digitizes and automates company-wide requests, forms, and approval workflows.

KonsulTulong 2025 – Present
Research Lead & Lead Developer. Pre-consultation patient data collection and risk assessment.

Sim.ula 2026
Lead Developer — Blue Hacks 2026 (2nd Runner-Up). Urban-policy AI simulation that assesses the impact of proposed Quezon City policies against past outcomes.

Schrollar 2026
Lead Developer — Hackfest 2026: Axis (2nd Runner-Up). Explore a topic's research ecosystem as a social feed — papers as posts, citations as replies.

Navio 2026
Developer. End-to-end IoT wearable GPS safety tracker: an ESP32-based device captures live GPS, uploads over WiFi with a SIM800L SMS fallback offline, and reports prepaid balance, while a Next.js/TypeScript + Cloudflare D1 web app gives a live Google Maps tracker with device status, speed, satellite count, route history, and upload logs.

alARMED 2026
Developer. Physics/IoT project: a WiFi-configurable ESP32 + Arduino alarm clock paired with an autonomous pan-tilt turret with an ESP32-CAM that tracks your face and sprays water to wake you, syncing wirelessly with the alarm body.

QR/FORGE 2026
Developer. Ad-free, in-browser QR-code generator and customizer with custom styles, colors, and logo embedding.

Toyota Valenzuela Community 2026
Developer. Community platform with events, forums, chat, and photo sharing for local car owners.

Blank Board 2026
Developer. Installable collaborative whiteboard app for chaotic, free-form thinking, with a unique authentication flow.

ARSAFest Ticketing System 2026
Developer. Online QR-code event ticket generator and verifier.

Memorize Baybayin 2026
Lead Developer. Anki-style flashcards to master the Baybayin script, powered by a custom spaced-repetition algorithm.

CODE Portal 2026
Developer. Internal digital infrastructure platform for Ateneo CODE (Consultants for Organization Development & Empowerment).

PatchPortrait 2026
Developer. Photo-mosaic generator that composes an image from variably-sized tiles instead of a uniform grid.

Project Sinag 2025
Lead Full-Stack Developer — BlueHacks 2025 (Top 10). Citizen monitoring and reporting with geolocation-tagged images on a map.

Klutch 2025
Full-Stack & AI Developer — DLSU Hacker Cup 2025 (2nd Runner-Up). Connects users with local blue-collar workers for gigs through a bidding and AI tagging system.

ARSA FlowerFest Shop 2025
Systems Manager & Developer. Online shop for selling, managing, and fulfilling flower deliveries.

PDFGetPNG 2025
Developer. Extracts PDF pages as PNG images entirely in the browser.

Keybound 2024
Lead Developer. Java Swing 2-player arena battler: spell-casting apprentices duel via typed key combos (fire, water, earth, wind) on a tile-based island map, with local/online lobby support, a server-authoritative game loop, custom pixel art, music and sound effects, and a scoreboard.

DNA Barcode Generator 2024
Lead Developer. Fetches mtDNA from NCBI and renders it visually as a DNA barcode.

Bio: Tech or Terror 2024
Developer. Educational site on biotechnology in biowarfare, featuring an interactive COVID-scientist simulator.

ArTest of Fate Online Gallery 2022
Lead Developer. Online gallery for the school-wide SportsFest art competition.

Automated Receipt Processor & Recorder 2022
Volunteer Developer. Uses OCR to process and record bank, GCash, and Maya receipts for the PSHS-EVC PTA.

RESEARCH

READSmart 2026 – Present
Co-author & Lead Developer. AI speech-recognition app for reading assessment and analytics in a rural elementary school.

Don't Leaf It to Chance 2022 – 2024
Research Leader. Toxicological analysis and DNA barcoding of traditional Filipino products.

RAILS: Reservation & Inventory for Laboratory Systems 2022 – 2024
Research Leader & Lead Developer. Full-stack lab-management web app for school laboratory units and similarly scaled systems.

Project PAGSACA 2022 – 2024
Research Leader. Vertical farming integrating Plant Microbial Fuel Cells, electroculture, and organic solar cells.

TaB Propellers 2023 – 2024
Research Leader. Hybridizing toroidal and bionic propellers for increased efficiency and noise reduction.

SPIn Battery: Spinning Portable Inertial Battery 2023
Research Leader. Conceptualization of a portable mechanical battery.

The Good, the Bad, and the Medium 2022 – 2023
Researcher. Case study on student perceptions of teachers.

ACTIVITIES & INVOLVEMENT

Hong Kong AI Summit (HKAI): BUILD ACROSS Hackathon 3–4 October 2026
Participant. Developed Element, an AI-assisted perfume personalization prototype for YAT.LIFESTYLE, and rewAInd, an AI-assisted insurance prototype with document extraction and recovery drafts.

OpenAI Build Week Manila 2026
Participant. Received US$150 in Codex and OpenAI API credits.

ARSAound 2026 – Present
Bass Guitarist. Performed with the dorm music group at gigs from concerts to events.

ARSAFest Concert Band 2026
Bass Guitarist. Live concert band performance.

32nd Int'l Conference on Computers in Education (ICCE) 2024
Student Volunteer. Helped facilitate the week-long ICCE 2024.

ECHO 2023
Senior Consultant & Mentor. Official CS alternative-learning activity of PSHS-EVC.

Project Teenspired 2019 – 2023
Volunteer & Technical Assistant. National advocacy against teenage pregnancy.

Junior Chamber International (JCI) Tacloban Love 2022 – 2023
Member. Community-driven projects.

Summer Math Tutorial 2022
Math Tutor. Lectured core concepts and prepared daily math activities.

RITS High School Press Futurize 2021
Participant. International collaboration to create a culture-showcasing magazine.

Ritsumeikan Global Summit 2020 (Japan) 2020
Participant. International summit for cultural exchange.

CERTIFICATIONS

Machine Learning Specialization (3/3 courses) — DeepLearning.AI & Stanford Online 2024 – 2025
Supervised ML: Regression & Classification; Advanced Learning Algorithms; Unsupervised Learning, Recommenders & RL

Deep Learning Specialization (3/5 courses) — DeepLearning.AI 2025
Neural Networks & Deep Learning; Improving Deep Neural Networks; Structuring ML Projects

TECHNICAL SKILLS

Languages: Java, JavaScript, TypeScript, Python, HTML, CSS

Frameworks: React, Next.js, Vue, Nuxt, SvelteKit, Node.js, Astro, Svelte

Tools & Platforms: Linux, Git, Self-Hosting, Cloudflare (Workers/D1), REST APIs, OCR pipelines

IoT & Electronics: Arduino, ESP32 (incl. ESP32-CAM), sensor/actuator integration, WiFi-connected embedded systems

Focus Areas: Full-Stack Web Development, Backend, Frontend, Machine Learning, AI, Technical Writing

LANGUAGES

English, Filipino, Waray-waray, Bisaya