

# Charles Joshua T. Uy

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## EDUCATION

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### Ateneo de Manila University

*BS Computer Science*

Loyola Heights, Quezon City

2024 – Present

- **Director's Lister — First Honors**
- **Fr. Bienvenido F. Nebres, SJ** Science Academic Scholar

### Philippine Science High School — Eastern Visayas Campus

*Core Science (Advanced Physics) | Math Level 2 (Advanced)*

Palo, Leyte

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)

## TECHNICAL SKILLS

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

**Frameworks:** React, Next.js, Vue, Nuxt, SvelteKit, Node.js

**Tools & Platforms:** Linux, Git, Self-Hosting, REST APIs, OCR pipelines

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

## EXPERIENCE

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### AKIVA Holdings Inc.

*Freelance Software Developer & Team Lead*

2025 – Present

*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)

*Deputy for Administration & Lead Developer*

2025 – Present

*Ateneo de Manila University*

- Lead 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
- Create masterfiles and cross-departmental systems for community events and projects

### The Guidon

*Digital Development Staffer*

2025 – Present

*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

### Computer Society of the Ateneo (CompSat)

*Developer & Learn2Dev Mentor*

2024 – Present

*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

*Member — Consultants for Organization Development & Empowerment*

2025 – Present

*Ateneo de Manila University*

- Provide organizational-development consulting for youth-led organizations to support youth empowerment

## SOFTWARE PROJECTS

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- ARSA Digital Ecosystem** | *Next.js, Node.js, Self-Hosted* 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** | *Full-Stack Web* 2025 – Present  
*Lead Developer.* Nationwide event platform centralizing discovery and ticketing for diverse gatherings.
- Agila** | *Full-Stack Web* 2025 – Present  
*Lead Developer.* Digitizes and automates company-wide requests, forms, and approval workflows.
- KonsulTulong** | *Full-Stack Web* 2025 – Present  
*Research Lead & Lead Developer.* Pre-consultation patient data collection and risk assessment.
- Sim.ula** | *Next.js, AI/LLM* 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** | *Next.js, AI Pipeline* 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 — via a custom AI pipeline.
- Navio** | *Next.js* 2026  
*Developer.* Real-time wearable GPS tracker with live tracking, one-press SOS, and route history.
- QR/FORGE** | *Next.js, Client-Side* 2026  
*Developer.* Ad-free, fully in-browser QR-code generator and customizer: dot styles, colors, logo embed, and PNG/SVG/JPEG/WEBP export with no tracking.
- Toyota Valenzuela Community** | *Next.js* 2026  
*Developer.* Community platform with events, forums, chat, and photo sharing for local car owners.
- Blank Board** | *Web / PWA* 2026  
*Developer.* Installable collaborative whiteboard app.
- ARSAFest Ticketing System** | *Web* 2026  
*Developer.* Online QR-code event ticket generator and verifier.
- Memorize Baybayin** | *Web* 2026  
*Lead Developer.* Anki-style flashcards to master the Baybayin script.
- Project Sinag** | *Full-Stack, Geolocation* 2025  
*Lead Full-Stack Developer — BlueHacks 2025 (Top 10).* Citizen monitoring and reporting with geolocation-tagged images on a map.
- Klutch** | *Full-Stack, AI* 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** | *Full-Stack Web* 2025  
*Systems Manager & Developer.* Online shop for selling, managing, and fulfilling flower deliveries.
- PDFGetPNG** | *Client-Side Web* 2025  
*Developer.* Extracts PDF pages as PNG images entirely in the browser.
- DNA Barcode Generator** | *Web, NCBI API* 2024  
*Lead Developer.* Fetches mtDNA from NCBI and renders it visually as a DNA barcode.
- Bio: Tech or Terror** | *Web* 2024  
*Developer.* Educational site on biotechnology in biowarfare, featuring an interactive COVID-scientist simulator.

<b>ArTest of Fate Online Gallery</b>   <i>Web</i>	2022
<i>Lead Developer.</i> Online gallery for the school-wide SportsFest art competition.	
<b>Automated Receipt Processor &amp; Recorder</b>   <i>Python, OCR</i>	2022
<i>Volunteer Developer.</i> Uses OCR to process and record bank, GCash, and Maya receipts for the PSHS-EVC PTA.	

## RESEARCH

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<b>READSmart</b>	2026 – Present
<i>Co-author &amp; Lead Developer.</i> AI speech-recognition app for reading assessment and analytics in a rural elementary school.	
<b>Don't Leaf It to Chance</b>	2022 – 2024
<i>Research Leader.</i> Toxicological analysis and DNA barcoding of traditional Filipino products.	
<b>RAILS: Reservation &amp; Inventory for Laboratory Systems</b>	2022 – 2024
<i>Research Leader &amp; Lead Developer.</i> Full-stack lab-management web app for school laboratory units and similarly scaled systems.	
<b>Project PAGSACA</b>	2022 – 2024
<i>Research Leader.</i> Vertical farming integrating Plant Microbial Fuel Cells, electroculture, and organic solar cells.	
<b>TaB Propellers</b>	2023 – 2024
<i>Research Leader.</i> Hybridizing toroidal and bionic propellers for increased efficiency and noise reduction.	
<b>SPIn Battery: Spinning Portable Inertial Battery</b>	2023
<i>Research Leader.</i> Conceptualization of a portable mechanical battery.	
<b>The Good, the Bad, and the Medium</b>	2022 – 2023
<i>Researcher.</i> Case study on student perceptions of teachers.	

## INTERNATIONAL HONORS & AWARDS

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<b>International Young Researchers Tournament</b> <i>international research competition</i>	<i>Gold Award</i> 2024
<b>13th Regional Congress, SEAMEO Search for Young Scientists (SSYS)</b> <i>SE-Asian re-search competition</i>	<i>Finalist</i> 2024
<b>Hong Kong International Computing Olympiad (HKICO), Final Round</b> <i>international CS olympiad</i>	<i>Gold Medal</i> 2023
<b>International Mathematics Wizard Challenge (IMWiC)</b> <i>SE-Asian math contest</i>	<i>Silver Medal</i> 2023
<b>Global Gifted Problem Solving Camp</b> <i>int'l robotics camp, Gimje, S. Korea</i>	<i>Leadership Award</i> 2023
<b>International Kangaroo Mathematics Competition</b>	<i>Bronze Award</i> 2021
<b>Hua Luogeng Golden Cup Mathematics Invitational</b> <i>one of China's toughest contests</i>	<i>Bronze Award</i> 2019
<b>International Math Open for Young Achievers (IMOYA), Singapore</b>	<i>Silver (Individual &amp; Group)</i> 2017
<b>International Teenagers Mathematics Olympiad (ITMO), National Parallel</b>	<i>Silver Award</i> 2017
<b>VANDA International Science Competition</b>	<i>Bronze Award</i> 2017
<b>International Mathematics Wizard Challenge (IMWiC)</b> <i>SE-Asian math contest</i>	<i>Bronze Medal</i> 2016
<b>Australian Mathematics Competition (AMC)</b>	<i>Certificate of Distinction</i> 2015
<b>World Math Invitational, Taiwan</b>	<i>Merit</i> 2014

## NATIONAL HONORS & AWARDS

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<b>Blue Hacks 2026</b> <i>24-hour hackathon, Ateneo de Manila University</i>	<i>2nd Runner-Up</i> 2026
<b>HACKFEST 2026: AXIS</b> <i>10-day hackathon, ADMU Google Developers Group</i>	<i>2nd Runner-Up</i> 2026
<b>Hacker Cup 2025</b> <i>2-day hackathon, De La Salle University</i>	<i>2nd Runner-Up</i> 2025
<b>Blue Hacks 2025</b> <i>24-hour hackathon, Ateneo de Manila University</i>	<i>Top 10 Finisher</i> 2025
<b>Ateneo College Entrance Test (ACET)</b> <i>top 200 of 10,000+ applicants</i>	<i>Director's Lister</i> 2024
<b>7th IMake.WeMake: Create. Innovate. Collaborate</b> <i>national makers competition, DOST-SEI</i>	<i>Finalist (Top 20)</i> 2024
<b>DOST Youth Excellence in Science (YES) Award</b> <i>national STEM achievement award</i>	<i>Awardee</i> 2023
<b>2nd Ateneo Physics Olympiad: Entanglement (APhO)</b> <i>national physics olympiad</i>	<i>Finalist</i> 2023
<b>Philippine Online Physics Olympiad (PhO2)</b> <i>national physics olympiad</i>	<i>Silver Medal</i> 2023
<b>DOST-SEI 6th Indie-Siyensya (Youth Category)</b> <i>national science short-film contest</i>	<i>3rd Place</i> 2023
<b>25th SquEEEze: National EEE HS Competition &amp; Convention</b> <i>electronics &amp; electrical engineering</i>	<i>1st Runner-Up</i> 2023
<b>Laban ng mga Maharlika Science Camp</b> <i>national group science camp</i>	<i>1st Place</i> 2021
<b>Pakaritay</b> <i>regional science quiz bee</i>	<i>1st Place</i> 2021
<b>Metrobank-MTAP-DepEd Math Challenge</b> <i>regional math competition</i>	<i>Top Scorer</i> 2018
<b>DOST Youth Excellence in Science (YES) Award</b> <i>national STEM achievement award</i>	<i>Awardee</i> 2017
<b>DOST Youth Excellence in Science (YES) Award</b> <i>national STEM achievement award</i>	<i>Awardee</i> 2016
<b>National Parallel Challenge for Future Mathematicians</b>	<i>Silver Medal</i> 2016

## LEADERSHIP

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<b>ARSA Seniors' Send-Off 2026</b>	2026
<i>Secretariat Head.</i> Annual dorm event sending off 100+ graduating seniors.	
<b>ARSAFEST SIDLAK 2026</b>	2026
<i>Secretariat Head.</i> Annual dorm event celebrating the diverse people and culture of the Ateneo dorms.	
<b>ARSA Year-End Party 2025</b>	2025
<i>Materials &amp; Decorations Head.</i> Official dorm student event with 300+ attendees.	
<b>Pisay Math Circle</b>	2023 – 2024
<i>President, Internal Affairs.</i> Led the official PSHS-EVC math club and organized a region-wide math competition.	
<b>Batch of 88–90 Students (G10, G12)</b>	2021 – 2024
<i>President.</i> Led batch-wide activities, events, and fundraisers.	
<b>Class of 30 Students (G7, G8, G11)</b>	2018 – 2023
<i>President.</i> Led class activities and yearly community outreaches.	
<b>Athletic Council</b>	2021 – 2022
<i>President.</i> Organized the annual school SportsFest for 500+ students.	

## ACTIVITIES & INVOLVEMENT

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<b>ARSAound</b>	2026 – Present
<i>Bass Guitarist.</i> Performed with the dorm music group at gigs from concerts to events.	
<b>ARSAFest Concert Band</b>	2026
<i>Bass Guitarist.</i> Live concert band performance.	
<b>32nd Int'l Conference on Computers in Education (ICCE)</b>	2024
<i>Student Volunteer.</i> Helped facilitate the week-long ICCE 2024.	
<b>ECHO</b>	2023
<i>Senior Consultant &amp; Mentor.</i> Official CS alternative-learning activity of PSHS-EVC.	
<b>Project Teenspired</b>	2019 – 2023
<i>Volunteer &amp; Technical Assistant.</i> National advocacy against teenage pregnancy.	
<b>Junior Chamber International (JCI) Tacloban Love</b>	2022 – 2023
<i>Member.</i> Community-driven projects.	
<b>Summer Math Tutorial</b>	2022
<i>Math Tutor.</i> Lectured core concepts and prepared daily math activities.	
<b>Nissan Palo, Leyte</b>	2021
<i>Intern.</i> One-month summer job and internship.	
<b>RITS High School Press Futurize</b>	2021
<i>Participant.</i> International collaboration to create a culture-showcasing magazine.	
<b>Ritsumeikan Global Summit 2020 (Japan)</b>	2020
<i>Participant.</i> International summit for cultural exchange.	

## CERTIFICATIONS

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<b>Machine Learning Specialization</b> (3/3 courses) — DeepLearning.AI & Stanford Online	2024 – 2025
<ul style="list-style-type: none"><li>Supervised ML: Regression &amp; Classification; Advanced Learning Algorithms; Unsupervised Learning, Recommenders &amp; RL</li></ul>	
<b>Deep Learning Specialization</b> (3/5 courses) — DeepLearning.AI	2025
<ul style="list-style-type: none"><li>Neural Networks &amp; Deep Learning; Improving Deep Neural Networks; Structuring ML Projects</li></ul>	

## LANGUAGES

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English, Filipino, Waray-waray, Bisaya