

Ian Anthony H. Castillano

BS Aerospace Engineering Student · Web & Software Developer · Student Researcher

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Aerospace Engineering student and web developer applying to SGAC's Web & Data Team. I built CEURA-LPN, an encrypted offline data-sharing network for rural communities, and launched Aeroscraping, a live aerospace research search engine. I also led development for my team at the 2026 NASA Space Apps Challenge, won Silver at Science Castle Asia, was recognized as a Pinoy Scientist, won first place in Online Publishing twice as a campus journalist, and led two student organizations.

EDUCATION

Cebu Technological University – Main Campus 2026 – Present
Bachelor of Science in Aerospace Engineering

Eastern Visayas Regional Science High School 2025 – 2026
Senior High School, STEM Strand · General average 97.4

Samar National School Until 2024
Junior High School, Special Program in Journalism

WEB, DATA & SOFTWARE PROJECTS

CEURA-LPN · Secure Offline Data-Sharing Network for Rural Communities Researcher & Developer
Orange Pi One H3 · offline web platform · AES-256 · solar-powered · ₱8,300 build

- Designed and built a website-based system that lets schools, health centers and LGUs share lesson modules, medical guides and disaster alerts over local Wi-Fi with no internet, using store-carry-and-forward networking.
- Protected shared data with AES-256 encryption, passwords and user access control, supporting multiple concurrent users through power and network interruptions.
- Cut mean file-transfer time by 58.6% (45.2 s to 18.7 s, $p < 0.05$). Evaluated with educators, health workers, LGU staff and farmers using ISO/IEC 25010 indicators: grand mean 4.29/5, with security rated highest (4.32).

Aeroscraping · aeroscraping.online Creator & Developer · Live

- Built and launched an aerospace research search engine: search one aircraft, and it identifies the exact model and gathers web results, images, three-view drawings and research papers on its structures, propulsion, aerodynamics and avionics.
- Integrated 7 open data sources (Wikipedia, Wikimedia Commons, NASA NTRS, NASA Images, OpenAlex, Crossref, UIUC Airfoil Database) plus a browsable aircraft dataset with search filters and region settings.

HIVE-WORKSPACE · Task, Goal & Team-Reminder Web App Current ongoing project

- My current ongoing project: a web app for students and small teams where year goals break into monthly goals and weekly tasks, with progress rolling up automatically and a calendar with drag-to-reschedule.
- Designing the data model for team rosters stored as name and email lists, with automatic email reminders and one-click "Mark done" links, so team members never need an account.
- Privacy built in: private, revocable calendar feed (.ics) links and minimal personal data per team member. Own domain registered.

ALSA: Tan-aw Catbalogan · City of Catbalogan Hackathon Lead Developer

- Led development of a community app connecting Catbalogan residents with local government services and civic engagement, built under hackathon deadlines.

ASCEND: Space Mission Design Game · NASA Space Apps Challenge 2026 Lead Developer

Unity 6 · C# · Git/GitHub · team project

- Led programming for a team educational game in which players plan a space mission, design the rocket and satellite, launch it, and operate it in orbit, built on the hackathon's 48-hour timeline.
- Built 3 missions modeled on real NASA missions, a CAD-style builder with a part catalog and mass, cost and budget tracking, and an automated design review that checks each design before launch.
- Implemented launch physics with staging, guidance and a rocket-equation orbital insertion, plus a planner that test-flies candidate rockets before recommending one. Fixed failures found through systematic flight testing.

AERONOVA: AI & Arduino-Based CO_2 Electrolysis System Science fair research

- Developed algorithms and a simulation for a system that splits CO_2 into oxygen and carbon monoxide. Analyzed oxygen output, power use and CO_2 removal time across trials (in simulation: 14.5 kW input at 70% efficiency, clearing a 10 m^3 volume in about 5 s).

LEADERSHIP & COMMUNICATION

President, Research Club Eastern Visayas Regional Science High School · 2025 – 2026

- Led the school's student research organization and supported members preparing science fair entries.

President, Science Society Samar National School · 2024

- Led the school science organization's activities and coordinated its officers and members.

Head Editorial Columnist & Online Publishing Team Samar National School, SPJ · 2023 – 2024

- Wrote editorials for the school publication and competed in online publishing, producing and managing web content on tight press-conference deadlines (Division 1st Place, 2023 and 2024).

AWARDS & RECOGNITION

- **Pinoy Scientist** recognition
- **Silver**, Science Castle Asia 2024 *(international)*
- **Silver**, Science Castle Philippines, Manila
- Delegate, SEAMEO REACSAM 2025 *(international)*
- **2nd Place**, Regional Science & Technology Fair 2024
- **1st Place**, Division Science & Technology Fair 2024
- **1st Runner-Up & Best Presenter**, Division STF 2025
- **3rd Place**, Division Science & Technology Fair 2023
- **1st Place, Online Publishing**, Division Schools Press Conference 2023 & 2024
- **Awardee**, Regional Schools Press Conference 2023 & 2024
- **Judge's Choice**, Robolution Programming Challenge
- **1st Place**, Robolution Chemistry Quiz · **5th**, NSEF STEM Talk

SKILLS

Web development: HTML, CSS, JavaScript, responsive design, public data APIs, domains and hosting

Data protection: AES-256 encryption, password and role-based access control, privacy-first data design

Data: SQL and database design, Python (data analysis and visualization with matplotlib), spreadsheets

Software: C# (Unity), Git/GitHub, Linux (Arch, Ubuntu), Arduino, Orange Pi / single-board computers, Blender, AI-assisted development (Claude Code)

Productivity: Google Workspace (Docs, Sheets, Forms, Drive)

Communication: technical and editorial writing, research presentation, online publishing

Languages: English (professional fluency), Filipino