Francis Adrian G. Esteban

Cagayan de Oro, Philippines
GitHub: github.com/AdiFranDev | Portfolio: https://francis-adrian-dev.vercel.app/

SUMMARY

Computer Science student with experience in applied technical research, systems development, and student-led governance and operations. Strong in structured problem-solving, policy and process design, and translating complex challenges into clear systems and documentation. Currently building depth in machine learning, generative AI, and data-driven tools, with a strong interest in responsible AI adoption and governance.

TECHNICAL SKILLS

- **Programming**: Python, C++, TypeScript, JavaScript, SQL, Java, C, HTML
- **Frameworks & Platforms**: React, Next.js, Node.js, Flutter
- **Data / ML / AI**: Pandas, NumPy, SciPy, PyTorch, Jupyter, Google Colab, Gemini API
- **Databases / Backend**: PostgreSQL, Supabase, Firebase, REST APIs, Postman
- **Developer Tools**: Git, GitHub, NPM, Vercel
- **Design / Documentation**: Figma, Canva, technical documentation, and structured reporting.

PROJECTS & RESEARCH

Capacity-Scaled Edmonds-Karp Evacuation Model **January 2025 – July 2025**
Lead Author

- Developed an applied research model using the Capacity-Scaled Edmonds-Karp algorithm to analyze evacuation routing across Downtown District 2 barangays in Cagayan de Oro.
- Identified network flow bottlenecks and evaluated route efficiency under constrained capacity, contributing to research on algorithmic approaches for urban evacuation planning.
- **Stack:** C++, Python, HTML

Guidance and Counseling Management System **September 2025 – December 2025**
QA & Documentation Lead

- Supported the development of a digital management system for USTP CDO Guidance and Counseling Services through quality assurance, validation, and technical documentation work.
- Strengthened system reliability and implementation readiness by helping align technical outputs with institutional workflows and documentation needs.
- **Stack:** Next.js (TS), Node.js, Supabase, Firebase, Vercel

FarmBox ERP **January 2026 – June 2026**
Project Lead

- Leading the design and development of FarmBox ERP, an agri-tech platform that integrates AI-powered bookkeeping and resource management for smallholder farmers.
- Aims to improve operational management, marketplace access, and community engagement by providing farmers with a mobile-first digital support system.
- **Stack:** Flutter, Supabase, Gemini API

AutoMotif_v2.1 **September 2025 – December 2025**
System Developer

- Developed a DNA and RNA sequence analysis tool with support for pattern matching, motif detection, sequence validation, and FASTA-based input workflows.
- Expanded its analytical utility by implementing multiple search approaches, including KMP, Levenshtein distance, Aho-Corasick, and motif-detection logic for educational and bioinformatics-oriented use cases.
- **Stack:** C++, C, Windows Forms / .NET-integrated C++ components.

BioMatcher **September 2025 – December 2025**
System Developer

- Built a Java-based system implementing the Knuth-Morris-Pratt (KMP) algorithm for efficient string pattern matching with biometric comparison-oriented functionality.
- Improved structured comparison efficiency by focusing on optimized prefix table construction and reliable matching performance for pattern-based analysis tasks.
- **Stack:** Java.

Cache Algorithm Visualizer **September 2025 – December 2025**
System Developer

- Developed an interactive educational tool that visualizes FIFO and LRU cache replacement behavior to support the learning of core operating systems concepts.
- Made abstract algorithmic processes easier to interpret in practice by presenting cache behavior through a more accessible and learning-focused interface.
- **Stack:** Python.

INTERNSHIP EXPERIENCE

Intern | Fresco Greenovations Inc. **April 2026 – July 2026**

- Participated as part of the team in the 2026 Presidential Filipinovation Awards, advancing as a Mindanao finalist and specifically contributing to the booth presentation.
- Contributed to agri-tech innovation by designing and developing smart farming systems, including ESP32-based IoT sensor networks for environmental monitoring and automated greenhouse control.
- Managed full-stack development tasks, including configuring relational database schemas with Supabase and building front-end interfaces with Flutter and Next.js.
- Led technical documentation efforts, including drafting Standard Operating Procedures (SOPs) for greenhouse crop management and maintaining hardware inventory logs.
- Produced digital media assets and promotional materials to support the company's Agri-Youth advocacy, utilizing motion graphics and video editing tools.
- Conducted hands-on agricultural operations, including plant propagation and automated sensor maintenance, bridging technical research with practical farm management.
- Volunteered in agricultural and food security advocacies conducted in partnership with the 4-H Club of Cagayan de Oro City.

LEADERSHIP EXPERIENCE

4-H Club USTP-CDO **August 2024 – present**

- Serving as a Senior Advisor and committee member of Community Outreach and Development (2026-2027)
- Served as Director of Community Outreach (2025–2026), leading external engagement and technology-agriculture initiatives intended to support urban farming communities.
- Previously served as Director of Events and Management (2024–2025), managing leadership and organizational development events and supporting collaborative activities with partner groups.
- Acted as a Founding Executive Officer, contributing to the establishment and early management of the unit.
- Represented the organization as a LEaP Delegate in training engagements with UNICEF, Accenture, Generation Unlimited, and Ateneo de Zamboanga University; the organization was recognized as an Outstanding Student Organization.

Computer Science Student Society USTP-CDO **August 2024 – present**

- Serving as the organization's senior advisor.
- Served as Electoral Commissioner (2025–2026), overseeing electoral processes and helping uphold fairness and procedural integrity within the society.
- Previously served as Vice President for Internal Affairs (2024–2025), authoring the CS3 CBL 2025, resolutions, and bills, and convening the first legislative body, now the 1st CS³ Congress.
- Served as Program Director for Hello World Orientation and Gabi ng Parangal, demonstrating experience in internal administration, event leadership, and governance work.

University City Scholars- USTP **August 2023 – present**

- Acting now as the senior advisor for the organization's Department of Academic Affairs.
- Served as a senior adviser and regular staff member.
- Served as Department Head of Academic Affairs (2024–2025), managing academic support programs and helping oversee student-centered initiatives focused on academic development and retention.
- Previously served as Associate Head and Core Officer, contributing to planning, organizational coordination, and implementation of programs and activities.
- As part of Project 3K (Kaalaman, Kakayahan, at Kabuhayan), I helped manage partnerships and event planning for a project that secured a ₱50,000 grant and received Exemplar and Best Program recognition.
- Represented the organization as a Global Youth Summit Delegate, helping secure a ₱50,000 seed grant through SM Cares and the Global Peace Foundation.
- Served as Program Director for Pagkat-on: School of ISDA and Teacher ko si ISKO, leading academic outreach, volunteer coordination, and student support initiatives.

COMMUNITY AND ACADEMIC INITIATIVES

Pagkat-on: School of ISDA **September 2023 – present**
University City Scholars - USTP - Program Director & Staff

- Directed overall programming (2023–2025) and currently serve as Senior Advisor for University City Scholars' academic outreach initiatives, advancing peer mentoring, student development, and academic support services.
- Centered on a train-the-trainer framework, these efforts encompassed curriculum design, volunteer management, and the establishment of student-focused academic support structures.

AgriVANture: A City-wide Youth-centered Agricultural Outreach Program **March 2026 – present**
4-H Club USTP-CDO - Program Director & Project Head

- Led and designed a youth-led, city-wide agricultural outreach initiative empowering youth and local communities through hands-on training in urban gardening, hydroponics, and leadership development.
- Spearheaded multi-barangay implementation and partnership coordination, bridging campus-based innovation with community-driven agricultural solutions.

AgriCARE School Urban Farm **April 2025 – May 2026**
4-H Club USTP-CDO - Project Co-head

- Co-head of a student-led agricultural initiative designed to empower local farming communities through technology and support.
- The initiative secured support through the LEaP Grant and focused on bridging student innovation with practical agricultural needs.

Project 3K (Kaalaman, Kakayahan, at Kabuhayan) **March 2024 – May 2026**
University City Scholars - USTP - Core Officer - Events Management & Partnerships

- Served as a core member and event manager for an award-winning food security project centered on transforming food waste through innovative approaches.
- The project supported scholar training in food security and sustainable practices and was recognized through grant-based youth development initiatives.

Youth Leadership, Governance, and Operations **September 2023 – present**

- Served in youth leadership and academic outreach initiatives under various organizations and volunteer networks, supporting peer mentoring, student development, volunteer coordination, and the design of student and youth-centered academic assistance frameworks.
- Expanded leadership work into student governance and parliamentary congress participation, contributing to the development of university measures and authoring bills and resolutions for the Computer Science community.

LEADERSHIP AWARDS AND RECOGNITION

- **2026 Youth Leadership Excellence Award** - Batang Lider Awardee - Junior Chamber International Philippines, Palaawan Pawnshop, Awarded by Senator JV. Ejercito
- **2026 CEDO Kinanao Leadership Awards -** Awardee, Volunteer of the Year
- **2026 CEDO Kinanao Leadership Awards** – Awardee, Pagkat-on: School of ISDA
- **UN SDG Awards (TOUSA)** - Mindanao Finalist, 4-H Club USTP-CDO
- **UN SDG Awards (TOUSA)** - Mindanao Finalist, Gabay Aral
- **2026 USTP Kahamili Leadership Awards -** Gold Awardee - Outstanding Project of the Year, AgriVANture, 4-H Club USTP-CDO
- **2026 USTP Kahamili Leadership Awards -** Shortlisted - Outstanding Student Organization, 4-H Club USTP-CDO
- **2026 USTP Kahamili Leadership Awards -** Gold Awardee - Outstanding Student Leader
- **2026 12th Regional 4-H Youth Camp and Agrilympics** - Regional Champion Hands Category (National Qualifier), AgriBIDA
- **2026 12th Regional 4-H Youth Camp and Agrilympics** - Regional Champion Health Category (National Qualifier), AgriCARE
- **2025 Kasadya Oro Youth Awards** - Most Outstanding Community Project, Project 3K
- **2026 Level UP 4-H CDO City-Wide Competition** - City-wide Champion Hands Category (Regional Qualifier), 4-H Club, AgriBIDA
- **2026 Level UP 4-H CDO City-Wide Competition** - City-wide Champion Health Category (Regional Qualifier), 4-H Club, AgriCARE
- **2025 72nd National Farm Youth Convention** - National Excellence Achiever Award - 3rd Place Health Category - University City Scholars, Project 3K
- **2025 11th 4-H Club Regional Young Farmers Camp & Agrilympics** - National Excellence Achiever Award - Regional Champion Health Category (National Qualifier), 4-H Club & University City Scholars, Project 3K
- **2025 Level UP 4-H CDO City-Wide Competition** - City-wide Champion Health Category (Regional Qualifier), 4-H Club & University City Scholars, Project 3K
- **2025 Kasadya Oro Youth Awards** - Most Outstanding Community Project for Social Involvement, University City Scholars - Project 3K
- **2025 Young Farmers Challenge Provincial Level** - Provincial Champion, University City Scholar, Project 3K
- **2025 CEDO Kinanao Leadership Awards** – Exemplar Award, Project 3K
- **2025 CEDO Kinanao Leadership Awards** – Exemplar Award, University City Scholars
- **2025 USTP Kahamili Leadership Awards** – Outstanding Student Organization, 4-H Club
- **2025 USTP Kahamili Leadership Awards** - Project of the Year, 4-H Club - AgriCARE
- **2025 USTP Kahamili Leadership Awards** - Outstanding Student Leader Nominee
- **2025 LEaP Program Delegate** - Represented 4-H Club USTP-CDO in training with UNICEF, Generation Unlimited, & Ateneo Zamboanga University

- **2024 USTP Kahamili Leadership Awards** - Gold Awardee - Outstanding Student Organization, University City Scholars
- **2024 USTP Kahamili Leadership Awards** - Project of the Year, University City Scholars - Project 3K
- **2024 Global Youth Summit** - Distinguished Recognition as VIP Delegate, with a ₱50,000 Seed Grant for Project 3K
- **2024 CEDO Kinanao Leadership Awards** – Outstanding School-Based Organization, University City Scholars
- **2024 CEDO Kinanao Leadership Awards** – Shortlisted, Pagkat-on: School of ISDA
- **2023 Liceo Student Leadership Awards** - Outstanding Service Awardee

EDUCATION & SCHOLARSHIPS

- **University of Science and Technology of Southern Philippines – Cagayan de Oro**
    - Bachelor of Science in Computer Science (2023 - 2027); Expected Graduation: June 2027
    - **Scholarships:** Cagayan de Oro City Scholarship Program; CHED-UniFAST USTAT Scholarship.