

# Paul Josef P. Agbuya

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 [e-portfolio-two-blond.vercel.app](https://e-portfolio-two-blond.vercel.app)



## SUMMARY

Analytical Software Engineering candidate with over a decade of programming experience, beginning with Visual Basic and maturing into C++ systems and full-stack web applications. Proven track record in managing high-autonomy tasks and fulfilling complex organizational contracts. Technically proficient in back-end development and Agile project management, with a foundational understanding of ISO/IEC 27001 information security standards.

## TECHNICAL SKILLS

- **Programming Languages**
  - C++, C, C#, Kotlin, Java, Javascript, GoLang, HTTP, CSS, Python3, LaTex, NASM x86-64, MySQL, Godot, Docker
- **Framework and Tools**
  - Reactjs, OpenCV, Scikit-Learn, Android Studio, OWASP Threat Dragon, RapidMiner Studio, Pandas Framework, Tableau, Unity Game Engine, Github Actions
- **Design and Creativity:**
  - Figma, Adobe Premiere Pro
- **Interests:**
  - Supervised Machine Learning, Data Science, Back-End Tools.

## EDUCATION

### College

- De La Salle University
  - Graduation Expected: September 2026
  - Taft Avenue, Manila
- BS in Computer Science - Major in Software Technology (2022-Present)
- CGPA: 3.75 | Consistent Dean's Lister | DOST Scholar | Brother Andrew's Science Foundation Scholar
- Minor in Information & Communications Technology for Business Agility (2025-Present)

## LANGUAGE

English - ★ ★ ★ ★ ★

## PROJECTS

- **Operating System Emulator | C++, Multithreading**
  - Constructed a thread-safe CPU scheduler supporting multiple scheduling algorithms (FCFS, Round Robin) to simulate real-world process management. All of which are capable of running
  - Implemented resource synchronization using C++ Mutexes and Condition Variables to eliminate race conditions up to 64 concurrent process threads.
  - Designed a dynamic Marquee console interface to visualize real-time process states and CPU utilization metrics.
- **MOROOMS: Digital Reservation System | React, TypeScript, Supabase**
  - Employed a full-stack reservation platform utilizing Supabase Row Level Security (RLS) to ensure 100% data isolation between user and admin roles.
  - Integrated Multi-Factor Authentication (2FA) and custom activity logging to audit user interactions and enhance system security.
  - Enforced frontend state management in TypeScript, resulting in a seamless UI experience for real-time room availability filtering.
- **Hyperparameter Tuning & Predictive Modeling | Python, Scikit-Learn**
  - Conducted extensive Feature Engineering on a dataset of 100+ variables to predict raw income, implementing statistical treatments and coefficient analysis to mitigate multicollinearity and reduce feature interdependence.
  - Enhanced predictive performance by 5% through Grid Search cross-validation of Random Forest and KNN models; successfully reached an accuracy threshold of 63% on high-variance raw income datasets.
  - Streamlined Exploratory Data Analysis (EDA) by developing automated visualization pipelines to identify key performance indicators (KPIs) and data correlations.
  - Leveraged Scikit-Learn to perform rigorous cross-validation, ensuring model robustness and minimizing overfitting across diverse data subsets.
- **“Pamahiin” Horror RPG Engine | Godot Engine, GDScript**
  - Lead Developer for a 2D RPG utilizing complex Finite State Machines to manage puzzle logic and artifact collection mechanics.
  - Created modular dialogue and quest system based on Filipino folklore, managing 30+ unique game npc states within a non-linear narrative.
- **Checkers Game Engine | Pure C**
  - Developed a logic-heavy board game engine using 3D arrays and ASCII-based rendering, requiring zero external dependencies.
  - Applied complex move-validation algorithms and recursive win-condition checks to manage game state transitions.

## LEADERSHIP AND SERVICE EXPERIENCES

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### Peer Tutor Society (2024 -2025)

- Spearheaded external communication strategies to maintain and strengthen partnerships with five university departments and various external organizations.
- Negotiated over 20 partnership propositions during a one-year tenure as the Externals Department lead, expanding the organization's professional network.
- Orchestrated the tracking and fulfillment of contractual obligations for all members, ensuring 100% compliance with complex partnership agreements.
- Managed a dedicated Externals Department, overseeing the lifecycle of critical documentation, professor outreach, and administrative signatures.
- Engineered a script to parse stakeholder data from spreadsheets and auto-populate personalized email templates, ensuring 100% accuracy in sensitive contractual communications.
- Optimized organizational efficiency by consolidating a multi-person manual workflow into a single-operator system, significantly reducing manpower requirements through automation.

### Technical Peer Tutor | DLSU BSCS Curriculum (2023-2025)

- Facilitated learning for 10 students across a range of subjects, including Calculus, C Programming Fundamentals, and Computer Architecture. Expanded tutoring through personalized study plans and coding review sessions that significantly improved tutee performance, earning a consistent 9/10 satisfaction rating across all sessions.

### 1911 Insurance Agency DLSU Scholar Service 2023-Present

- Maintained high academic standing as a scholar while consistently fulfilling 100+ hours of service per semester for two consecutive years. Creatively made existing organizational hierarchies and process flows, managed critical documentation, and provided technical consultation for departmental improvements.

## CERTIFICATIONS AND AWARDS

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- Br. Andrew Science Foundation Scholarship (2023-Present)
- DOST Merit Scholar 2022
- Consistent Dean's Lister in DLSU
- Top 250, Blue Ocean Competition - Entrepreneurship (2022)
- High Honors Graduate, City of Mandaluyong Science High School (2022)
- Top 10 Individual Regionals Metrobank MTAP (2019)
- 2nd Place Regional Science and Technology Fair (2019) in Robotics
- Hackercup Participant (2023)
- Top 5 Finalist, 2022 Concentrix MOVE Challenge Hackathon (2022)
- OpenCV Bootcamp - September 2024