

JOHN CARLO D. MARTIN

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EXPERIENCE

National Bureau of Investigation (NBI)

June 2024 - July 2024

Software Engineering Intern

Laoag City, Ilocos Norte

- Programmed and developed a Python-based tool to search and extract specific warrant information from PDF, scanned PDF, and Word documents.
- Implemented OCR (Optical Character Recognition) using Tesseract to read and pull text from scanned documents.
- Made the search more accurate by checking for keywords and organizing the results clearly.

EDUCATION

Northwestern University (NWU)

Expected Graduation: June 2025

Bachelor of Science in Computer Engineering

Laoag City, Ilocos Norte

Courses: Computer Programming, Programming Logic and Design, Data Structures and Algorithms, Object Oriented Programming, Software Design, Operating Systems, Computer Architecture and Organization, Embedded Systems

PROJECTS

Warrant Searcher Application

Python | Tesseract OCR

Internship Project at NBI

- Developed a Python based tool to search for warrant-related information in PDF, scanned PDF, and Word files.
- Used OCR (Tesseract) to extract text from scanned documents.
- Enabled keyword-based search and extraction to save manual review time.

CitinexAI (Front-End Prototype)

HTML | CSS | JavaScript

Technopreneurship Class Project

- Designed and developed a responsive website prototype for an AI-based smart city planning platform.
- Created interactive layouts and content to visualize how AI, IoT, and GIS technologies could be used in sustainable urban development.
- Presented during a business plan pitch in class to simulate the user interface for potential clients.

Biometric-Activated Smart Classroom

Arduino | ESP32 | ESP32-CAM | RainMaker IoT

Thesis/Final Year Project

- Developed a smart classroom prototype with biometric access, automated lights/fans/AC, break mode, and session-based entry control.
- Integrated RFID-based equipment monitoring, theft detection, and tailgating alerts with professor-only overrides.
- Included IoT intrusion detection via RainMaker with real-time alerts and ESP32-CAM for live CCTV monitoring.

SKILLS

Programming Languages: Python, HTML5, CSS3, JavaScript, Java

Developer Tools: Visual Studio Code, Git & Github, Arduino IDE

Soft Skills: Communication, Problem Solving, Adaptability, Team Collaboration