Ariane Villanueva

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Computer Science graduate (Magna Cum Laude) with foundational skills in Python, SQL, and Excel, and a growing experience in data analysis and visualization. Detail-oriented and analytical, with proven problem-solving abilities and a commitment to continuous learning to transform data into actionable insights.

EDUCATION

Tarlac State University   **July 2025**
Bachelor of Science in Computer Science   *Tarlac City, Tarlac*

- Magna Cum Laude
- Consistent Dean's Lister (A.Y. 2021-2025)
- Participated in student-led programming and game development workshops organized by CCS Programmer's Den, gaining hands-on experience in collaborative and project-based settings

CERTIFICATIONS, SKILLS, AND SEMINARS

- **Certifications:** Cyber Threat Management (Cisco); Philippine Civil Service Eligibility – Second Level
- **Technical Skills:** SQL; Python; Microsoft Office; Data Analysis and Visualization; PHP; GitHub; Java; Front-end Web Development; Software & Hardware Troubleshooting
- **Soft Skills:** Attention to detail; Problem-solving; Collaboration & Communication; Initiative & Continuous Learning; Time management in Fast-Paced Environments; Strategic Planning
- **Seminars**: Digital Literacy on Spreadsheets (DICT); Essential Tools for Designers (DICT); Techtips 022: Hackproofing Your Digital World (DOST)

WORK EXPERIENCE

Provincial Government of Tarlac   **Jun. 2024 – Aug. 2024**
Data Encoder (Internship)   *Tarlac City, Tarlac*

- Digitized and organized 10,000+ claimant records from outdated property logbooks into Excel, improving accuracy and retrieval speed by 40%.
- Ensured confidential handling of sensitive records, supporting compliance and efficient government operations.

PROJECTS

Sentiment Analysis for Market Trend Classification Focusing on TikTok Using Multinomial Naïve Bayes

- Developed a sentiment analysis system utilizing Multinomial Naive Bayes and VADER, achieving 86.75% accuracy, above baseline performance for multilingual, troll and slang-heavy datasets.
- Processed and analyzed thousands of TikTok comments using NLP preprocessing and web scraping.
- Built a comment harvesting tool to extract and preprocess TikTok video comments for offline analysis and designed a correction database to refine mislabeled data.
- Created interactive dashboards with tools such as Matplotlib & Seaborn to visualize sentiment distribution, trend scores, and market insights.

Smart Sensing: Utilizing Arduino for Blind Assistance

- Built a prototype utilizing Arduino Uno and ultrasonic sensors (HC-SR04) to detect obstacles within a 100 cm range, improving accessibility for visually impaired users.

Automatic Watering System for Urban Gardening

- Designed a prototype to optimize urban gardening through automated soil moisture monitoring and irrigation control.

Student Information, Grades, and Schedule Database System

- Designed and implemented a database management system for educational institutions that centralizes on student information, academic records, and class scheduling in a modular architecture