# DAVID WILFRED E. TUAZON

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#### **EDUCATION**

## **BULACAN STATE UNIVERSITY**

Malolos, Bulacan

Bachelor of Science in Mathematics with specialization in Computer Science

Expected May 2026

Cumulative GWA: 1.86

Relevant Coursework: System Analysis and Design, Game Development, Operating Systems, Algorithms, Machine Learning

#### **WORK EXPERIENCE**

#### WEB DEVELOPMENT INTERN - MET Review

June-July 2025

- Implemented JWT-based authentication for a MERN stack application, including secure token generation and validation
- Built backend register and email verification handlers in Node.js/Express, integrating with an existing email service
- Developed responsive frontend pages for email verification using React (TypeScript)
- Ensured seamless integration between backend and frontend through consistent API routes and secure token handling

## **UNIVERSITY PROJECTS**

#### WATER ALLOCATION STRATEGY MODEL USING GENETIC ALGORITHM

May 2025

- Developed a prototype water allocation optimization model using Python and the DEAP library
- Applied Multi-Objective Genetic Algorithm with NSGA-II to optimize weekly water allocation across multiple farms
- Gained experience in multi-objective optimization, evolutionary algorithms, and environmental modeling

## HANDWRITTEN DIGIT RECOGNITION - MACHINE LEARNING CASE STUDY

May 2025

- Developed a convolutional neural network (CNN) using PyTorch to recognize handwritten digits
- Trained the model on MNIST dataset and evaluated performance on EMNIST dataset for robustness
- Gained hands-on experience in image classification and deep learning fundamentals

## **QAWAH CAFÉ – E-COMMERCE WEBSITE**

May 2024

- Developed a full-stack e-commerce website for a café using Node.js, Express.js, and MongoDB
- Designed and built RESTful APIs for smooth client-server communication
- Managed backend logic, routing, and MongoDB data modeling
- Core features completed and tested locally

## UNDEAD ACADEMIA – SURVIVAL HORROR GAME

May 2024

- Developed a 2D survival game with horror, suspense, and thriller elements using Unity Engine in a team setting
- Personally designed and implemented the Zombie AI system using behavior-based programming
- Released on itch.io https://damnflacko.itch.io/

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### **ACTIVITIES**

#### AN EQUAL SHARE - GMTK GAME JAM 2024

August 2024

- Collaborated in a 5-person team to develop a fully playable game demo within a 5-day game jam (Aug 17-21) using Unity Engine
- Created all core gameplay mechanics and assets under tight time constraints
- Achieved #450 ranking in Style and #1706 overall out of 7,565 global entries
- Released on itch.io https://damnflacko.itch.io/

## **ADDITIONAL**

**Technical Skills**: Java, C#, JavaScript, TypeScript, Python, HTML/CSS, React, MongoDB, Node.js, Express.js, Unity Engine, PyTorch, DEAP (Genetic Algorithms)