

**Patrick R. Eva**

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## Tech Skills and Projects

**Programming:** Java, Python, JavaScript, MySQL

**Frameworks:** Tensorflow, Keras

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## Education

### National University

- Lipa City, Batangas

Bachelor of Science in Computer Science, GWA: 2.80 / 4.00 2022 - 2026

Relevant Coursework: Systems Programming, Data Structures and Algorithms, Advanced Machine Learning, Deep Learning, Software Engineering

### Cuenca Senior High School

- Cuenca, Batangas

Accountancy Business and Management, GWA: 3.00 / 4.00 2020 - 2021

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## Projects

### NPK Deficiency Detector in Bitter Gourd Leaves || Software Engineering Project

· Developed a Deep Learning CNN model using ResNet50 to classify bitter gourd leaves as healthy or deficient in nitrogen, phosphorus, or potassium. As the lead AI programmer and data scientist, I handled dataset preparation, model design, and performance tuning.

- Achieved 95% accuracy, with an F1 score of 96% , Precision of 96% , and Recall of 96% .
- Trained and tested on 2,500+ verified images, sourced online and through local data validated by the Department of Agriculture IV-A.
- Focused on improving model generalization and minimizing class imbalance for real-world agricultural applications.

## **Predicting Enrollment Probability Using KNN and Random Forest || NU-Lipa School Commission Project**

- I was one of the selected project members, assigned mainly to frontend tasks. I contributed by developing and reviewing the user interface and by checking other system components related to the frontend integration.

### **AI Peaches Classification**

- Built an image-based peach classification system using the MobileNetV2 architecture as part of a deep learning course project. Handled dataset collection, preprocessing, data augmentation, and model training with fine-tuning in Google Colab to accommodate limited local computing resources. Utilized transfer learning to enhance feature extraction and improve classification accuracy between peach and non-peach images.

Achieved an F1 Score of 0.99609, Precision of 0.99613, Recall of 0.99609, and Accuracy of 0.99609.

### **Leaf It Up to Me**

- A web web-based computer vision system that leverages a MobileNetV2-based Convolutional Neural Network (CNN) to perform multi-class classification of coffee leaf images into Healthy, Rust, Phoma, and Miner disease categories.

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## **Coffea Liberica Farm Geomapping and KNN-Based Sensory Lexicon Classification || Thesis**

- Developed a *Coffea Liberica* farm geomapping and sensory lexicon classification system using K-Nearest Neighbors (KNN). The project involved preprocessing sensory evaluation data, extracting relevant features, and applying KNN to classify flavor and aroma descriptors. I assisted in dataset preparation, model implementation, and accuracy evaluation.

## CERTIFICATIONS

IC3 DIGITAL LITERACY GLOBAL STANDARD SIX - CERTIPORT

Prompt Engineering Specialization - Coursera (Vanderbilt University)

ChatGPT Advanced Data Analysis - Coursera (Vanderbilt University)

