Karl Adrian T. De Guzman

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LinkedIn GitHub Kaggle

EDUCATION AND HONORS

Adamson University, College of Engineering *San Marcelino St, Ermita, Metro Manila*
Bachelor of Science in Computer Engineering August 2018 – Current

- Relevant Coursework: Data Preparation, Data Cleaning, Data Analytics, Machine Learning, Deep Learning
- Ongoing research on using Artificial Intelligence in detecting driving distractions

Cavite National Science High School, Regional Science High School *Maragondon, Cavite*
Junior and Senior High School, STEM Track June 2012 – April 2018

- With Honors

WORK EXPERIENCE

Cirrolytix, Data Scientist Intern, R&D June 2021 – August 2021

- Utilized Python and Tableau in creating a dashboard showing visualization of COVID-19 online articles scraped from GDELT and Designed a Suicide Registry for pilot testing
- Joined a global hackathon to solve challenges related to COVID-19 Pandemic by highlighting the significant changes of COVID-19 Pandemic through visualizations and guided insight for the prospective users. The dashboard was intended to visualize economic proxies through nightlights, economic activities, and the lock-down timeline in the Philippines. It makes use of multiple space data from NASA, ESA, and JAXA

ACCOMPLISHMENTS

- Global Finalist 2021 – Earth Observation Dashboard Hackathon, NASA, EXA, JAXA
- Champion of 2016 and 2017 Division Science Technology Fair and Congress Innovative Category
- Champion of 2016 Regional Science Technology Fair and Congress Innovative Category
- 8th place Hackfest 2020: Online, Developer Students Club – Loyola
- 1st Runner Up ICpEP.SE NCR Sumobot Competition

RELEVANT TRAININGS

- Supervised Machine Learning: Regression and Classification, DeepLearning.AI, Stanford University, offered through Coursera 2022
- Data Cleaning and Manipulation with Pandas, DataCamp 2021
- Getting Grounded on Analytics, Project Sparta 2021, DAP
- Essential Excel Skills for Data Preparation and Analysis, Project Sparta 2021, DAP
- The Data Science Course 2021: Complete Data Science Bootcamp

SKILLS

- **Programming Languages:** Python, C++, C#, Dart
- **Data Science:** Cleaning, Wrangling, Visualization, Interpretation, Statistics, Excel, Git, Machine learning, Deep Learning, TensorFlow, Model Deployment
- **Web Development:** HTML, CSS, JavaScript, Bootstrap, Python Django, Google Firebase
- **Mobile App Development:** Flutter, Dart

ORGANIZATIONS

- Analytics Association of the Philippines, Member, 2021
- Institute of Computer Engineers of the Philippine Student Edition – NCR Chapter, Member, 2021
- Mechatronics and Robotics Society of the Philippines, Board Member, 2021

PROJECTS

Distrasya: A Multi-view Distracted Driving Detection System, Thesis May 2021 – Current

- A distraction detection system that aims to prevent inattentive driving and its potential risks using deep learning to detect multi-classes of driver distraction and evaluates it using a pointing system for a mobile gamification app. It uses multi-view detection system with the application of Multiple Convolutional Neural Networks (CNN) to detect multiple distracted driving classes.
- Technology used: Python, TensorFlow, Keras, CNN, Transfer Learning, Embedded Systems, Flutter

Rice Image Classification, Image Classification April 2022

- Uses Convolutional Neural Network (CNN) to classify five (5) different rice varieties in images such as Arborio, Basmati, Karacadag, Jasmine, and Ipsala. The success from three models were achieved as 99.42% for Vanilla Model, 99.10% for VGG16 Model, and 99.82% for fine-tuned VGG16 Model.
- Technology used: Python, TensorFlow, Keras, CNN, Transfer Learning

GiveSIGHT, Earth Observing Dashboard, Global Hackathon June 2021

- Aimed to improve the current EO dashboard by highlighting the significant changes of COVID-19 Pandemic through visualizations and guided insight for the prospective users. The proposed dashboard is intended to visualize economic proxies through nightlights, economic activities, and the lock-down timeline in the Philippines. It makes use of multiple space data from NASA, ESA, and JAXA. We achieved global finalist among the competitors across the global regions.
- Technology used: Vue.js

Padayon, Mobile Application May 2021

- A mental health mobile application intended to help users fight mental anxiety and depression.
- Technology used: Flutter, Dart, Git

WaTask, Web Application January 2021

- A website intended to support local farmers through spreading awareness of their current situation with the Rice Tariffication Law. It a designed system with features including a to-do-list app and a water tracker, that will earn virtual sacks of rice per requirements met. These sacks of rice will serve as the voice for the local farmers.
- Technology used: HTML, CSS, Bootstrap, JavaScript, Google Firebase, NoSQL

Plantsify, Mobile Application November 2020

- With the theme "Traversing The Filipino New Normal with Technology," my team built a mobile application promoting the benefits of house plants during the pandemic and all the necessary information on how to be a responsible plantito/plantita. We are one of the 10 finalists out of 160 teams.
- Technology used: Flutter, Dart, Git

Other Projects:

- COVID-19 Chest Xray Image Classification
- Fire Detection using Convolutional Neural Networks
- Smart-Item Receiving Box with Virus Disinfection