

EDUCATION

University of the Philippines Diliman
BS Computer Science, University Scholar, GWA: 1.167

Philippines
2019 - 2023

EXPERIENCE

University of the Philippines Diliman

Computer Programmer III

Jan. 2021 – Present

- Maintaining and upgrading UVLê – UPD's LMS handling 10,000+ users
- Working with industry-scale databases (LDAP and PostgreSQL)
- Performing cloud infrastructure and system maintenance
- Working in a team of 5

Thinking Machines Data Science Inc.

Machine Learning Engineer Intern

June 2022 – Aug. 2022

- Built a cloud-ready Detectron2 boilerplate for model training, evaluation, and demonstration
- Fine-tuned Detectron2 models to perform well on the UA-DETRAC dataset
- Created a dataset of articles by historically scraping several news and newsletter sites
- Conducted an exploratory project for classifying articles into custom tags using various NLP methods

Thinking Machines Data Science Inc.

Data Engineer Intern

June 2021 – Aug. 2021

- Built Dagster pipelines for transferring client data to GCP
- Deployed Dagster pipelines to GCP
- Built an extensive API for manipulating aggregated single-customer view data stored in GCP
- Worked with various teams with sizes ranging from 3-10

PROJECTS

CrowNNs: Tree Crown Detection using FCOS | *PyTorch*

- Extends the DeepForest library to accommodate other pre-trained object detection models.
- Fine-tuned and evaluated a pre-trained FCOS model on the NEON Tree Crowns dataset

LPRNet Keras Implementation | *Keras*

- LPRNet is a neural net for license-plate recognition on small devices
- Trained on CCPD2019 - a dataset of 200,000 Chinese license plates
- Built as a supplement to Hands-on Machine Learning and Deep Learning with Python

Multi-threaded File Server | *C*

- Built as a proof-of-concept for concurrent file manipulation
- Uses hand-over-hand locking to ensure file manipulation requests are executed in-order

Root-finding Solution to Lotka-Volterra Predator-Prey Model | *NumPy, Matplotlib*

Simulation of Halley's Comet using Runge-Kutta | *NumPy, Matplotlib*

Flood Damages Dashboard | *Python, OpenStreetMap, QGIS*

- NASA Space Apps 2020 Submission
- Used QGIS to convert Metro Manila city boundaries into GeoJSON and intersect boundaries with another map
- Pooled and cleaned data from JAXA GSMaP (HDF5), NASA EONET (JSON), PhilGIS, and LiPAD (.gpkg)
- Created Python/Pandas script to scrape hourly PAG-ASA Rainfall and Water Level data since 2012

SERVICE

Google Developer Student Clubs Diliman

Chief Technology Officer

August 2021 – August 2022

- Led a department of 35 developers working on internal projects
- Oversaw internal projects such as the organization's website

UP Center for Student Innovations

Director for Engineering

August 2021 – Present

- Leading a team of 2 developers working on a mix of service and client projects
- Oversaw maintenance of the organization's I.T. resources
- Oversaw client project compensations

UP Center for Student Innovations

Scrum Master

Sept. 2020 – Jan. 2021

- Managing a team of 3 developers working on UPD Mobile
- Leveraged AWS Lightsail for Django API
- Created endpoint to overlay custom polygons and locations in Google Maps
- Took over existing Flutter codebase from previous team

TECHNICAL SKILLS

Languages: Python, C/C++, PHP, Bash

Frameworks: PyTorch, Keras, Dagster

Tools: Git, GCP, AWS, Elasticsearch, Proxmox

OS: Linux, Windows

DB: SQL, PostgreSQL, LDAP

INTERESTS

Swimming

- I swim as a hobby; used to do it competitively

Piano

- Beginner and taking baby steps