# Sirawitch Tiyasuttipun

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#### **Related Course**

Data Structure, Algorithm Design, Software Engineering, Database, Discrete Math, Linear Algebra, Statistics, Object-Oriented Programming (OOP), Operation Systems(OS), Computer Network, Data Science, Neural Network, Artificial Intelligence, Software Architecture, Software Defined-System

#### **Education**

Chulalongkorn University (Expected graduation Jun 2024)

2020 - Present

Candidate for Bachelor of Engineering in Computer Engineering

Debsirin School

2014-2020

Middle School as Normal Room and High School as Normal Sci-Math Room Skill

## Languages

Native in Thai, Intermediate in English

#### **Skills**

**Programming Language :** C++, Python, Java, Scala, JavaScript, TypeScript, MongoDB, MySQL

Tools: Git, GitHub, Docker, Google Colab, Excel, Selenium, FastAPI

Python Library: Pandas, NumPy, Selenium, Scikit-learn, FastAPI, PyTorch

Software Engineer Framework: Node.js, NextJS, ReactJS, TailwindCSS, Prisma, JavaFX

## Work Experience

#### **Business Analyst(Internship)**

Jun - Jul 2023

- Worked on geographic information system (GIS) projects using ArcGIS and Excel.
- Obtained data from trusted websites, such as government agencies, regarding population, density, education levels, age distribution, number of students, income and expenses, and occupations, segmented by sub-districts (tambon).
- Most of the data we obtained is separated by district (amphoe) or province (changwat).
  We utilize the population size or area size of the sub-district to segment the data into sub-districts (tambon).
- Created Excel templates to facilitate the calculation of GIS data, specifically focusing on the segmentation of data into sub-districts.
- Utilized statistical estimation to predict age-segregated population trends. Developed a linear equation based on data from each year, enabling the prediction of next year's population by leveraging the current year's population.

#### **Awards**

**Computer IPST Camp 1** 

2019

Participated in the IOI Training Camp to determine the representative for Thailand. Approximately 30 students took part in this round, with the selection of certain students for the next round.

#### Silver Medal in TOI 15th

2019

Competed in the 15th Thailand Olympiad in Informatics, where approximately 90 competitors from each center worked to solve algorithmic problems.

## **Project**

## Car Appraisal with AI

2023 - Present

- AI platform for predicting the value of used cars.
- Model to predict car images, determining both the car's version and subversion.
- Predictive model for estimating the value of used cars, allowing users to input specific details to determine the car's market price.
- Implemented FastAPI with Python to integrate a predictive model and connect to a PostgreSQL database.
- Utilized Selenium (Python) for web scraping data from the car market before training the model

PET/CT brain scan 2023

- Implemented image segmentation using the DeeplabV3\_Resnet50 model from PyTorch to segment brain scans originating from epilepsy cases
- Trained the model using Dice loss as the loss function and evaluated its performance with Intersection over Union (IoU)

## WigglePaws Project

2022

- Developed a matching platform connecting pet sitters with pet owners, where owners can find suitable sitters to care for their pets.
- Developed a platform using PostgreSQL DB, Docker (for local database usage), NextJS (with ReactJS), tRPC, TailwindCSS, Prisma, T3Stack, NextAuthJS, and deployed the application with Railway
- Implemented a website featuring a comprehensive set of functionalities, including a chat system, booking system, schedule system, review system, payment system, searching system, and an administrative system
- Developed as a Frontend Developer, primarily using NextJS (with ReactJS) and TailwindCSS. Connected to backend APIs to display dynamic content on webpages

## **Activity:**

#### **Teacher Assistant in Programming Methodology**

2023 - 2024

Subject covering Object-Oriented Programming in Java, encompassing key concepts such as superclass, abstract classes, interfaces, threads, and GUI development using JavaFX

## **Teacher Assistant in Programming Language Principles**

2024

Subject covering Programming language Concept (Such as control flows, data type, naming, scope and binding), Alternative Programming Model (Scala as Functional Language), Language and Implementation (Such as Parser, Code Generator, Lexical Analyzer, Compiler)