ALFRETHANOV CHRISTIAN WIJAYA

Bachelor of Computer Science (B.C.S. / S.Kom.)

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EXPERIENCES

Human Initiative Headquarter | Depok, West Java, Indonesia   January 2023 – March 2023
Web Developer Internship

- Developed a website for library management system that will be used in all of Human Initiative office branches using JavaScript, SQL, PHP, CSS, and HTML.
- Created a Dashboard for the Admin to monitor the website's traffic.
- Created CRUD features to fulfill all of the users' and stakeholders' unique requirements.

EDUCATIONS

Diponegoro University | Semarang, Central Java, Indonesia   August 2020 – May 2024
Bachelor of Computer Science (B.C.S / S.Kom.)   **GPA: 3.63/4.00 (Cum Laude)**
Major**:** Informatics   **TOEFL Score: 593/677**

Related courses**:** Data Science, Data Mining, Big Data, Machine Learning, Programming & Algorithms, Algorithmic Strategies & Analysis, Pattern Recognition, Object-Oriented Programming, Intelligent System, Modeling & Simulation, Computer Vision, Evolutionary Algorithm, Data Structures, Logic in Informatics, Project Management, Statistics, Mathematics, Numerical Methods, Linear Algebra, Databases, Database Management, Information Assurance & Security. Software Engineering, Software Project, Software Testing, Platform-Based Development, Operating System, Information System, Computer Graphics & Visualization, Programming Fundamentals, English.

Bangkit Academy (Kampus Merdeka) | *Online Course*   August 2023 – January 2024
Student of Machine Learning   **Average Score: 89/100**

- Studied Python and its associated libraries, Statistics, Mathematics, Machine Learning, Deep Learning, Keras, TensorFlow, Data Analysis, Data Visualization, GitHub, English Communications, Storytelling, and Soft Skills.
- During Capstone Project, my team developed an android app, namely *Tutorin*, that has a Machine Learning feature inside which could detect the name of a gym equipment in a picture (an object detection model). I was responsible in developing the object detection model using CNN and YOLO. The model has the value of each training and validation accuracy by 88% and 81%. The model was trained with 2130 gym equipment images (scraped from webpages).

PROJECTS

Data Science & Software Engineer Freelance Projects | *Remote*   December 2022 – May 2024

- Developed an image segmentation model using MobileNetv3 which detects rice plant diseases in pictures.
- Developed a time-series forecasting model using Support Vector Regression (SVR) to forecast rainfall.
- Developed a time-series forecasting model using Backpropagation and Holt-Winter to forecast stock prices.
- Developed a time-series forecasting model using Prophet, Particle Swarm Optimization (PSO), and Improved Seagull Optimization Algorithm (ISOA) to forecast stock prices.
- Developed a segmentation model using K-Nearest Neighbor (KNN) and Principal Component Analysis (PCA) to segment football clubs' based on their performance characteristics.
- Developed a website (for demonstration purposes only) capable of identifying the closest branch of an X Company (the company didn't permiss its name to be displayed here) to a specific inputted location (latitude & longitude) data.

Lerep Village Homestays Information Center & Marketing | Semarang, Indonesia   July 2023 – August 2023

- Created a website to markets and provides informations (facilitations) on the Homestays of Lerep Village. This project takes place during the Kuliah Kerja Nyata (KKN) campus' program.
- The website was designed responsively so it is neatly displayed on many devices (Monitor, Laptop (Small to Large), Tablet / Ipad. Mobile Phone (Small to Large)) using fundamental techniques of CSS, JavaScript, and HTML.
- Each piece of homestay information data was stored and managed in Firebase Firestore and Firebase Storage.

Students Performance Segmentation Website | Semarang, Indonesia   October 2022 – February 2022

- Developed a website capable of segmenting students in United States of America (USA) based on their academic performance characteristics using KNN, PCA, Flask, Python, Jupyter, JavaScript, HTML, and CSS.

PUBLICATIONS

Prophet Algorithm Optimization with Particle Swarm Optimization for Adjusted Closing Price Forecasting in Xiaomi Corporation | (7th International Conference on Informatics and Computational Sciences, ICICoS 2024) Semarang, Indonesia   October 2023 – Ongoing

- Developed a *time-series forecasting* model using Prophet and PSO algorithms where the PSO is used to optimize the Prophet algorithm.
- The proposed model achieved a high level of accuracy with MAPE and R^2 values of 0.000000085 and 0.999, respectively, which means the model is very accurate in forecasting the Xiaomi Corporation's stock prices.

PATENTS

SiMAPeDI | Semarang, Indonesia   October 2022 – October 2072
Patent Number: EC002023110389 | Registration Number: 000543344
Submitted Via: Diponegoro University

Developed an automated monitoring system (SiMAPeDI) with my lecturers in Diponegoro University that is developed to help shrimp / fish farmers on monitoring the water quality of their farm. The automated monitoring system is a website that is connected to microcontrollers where those microcontrollers will send the water quality data every 10 seconds to the database of the website in *real-time*. The website was developed using Laravel, SQL, JavaScript, HTML, and CSS.

TRAINING & COURSES

Coursera | *Online Course*   August 2023 – November 2023
Student

Studied Machine Learning, Deep Learning, Algorithms, Statistics, Mathematics, Python, SQL, Data Science, Data Analytics, Data Engineering, Data Processing / Cleaning, Data Visualization, Forecasting, Image Segmentation, Object Detection, Neural Networks, CNN, TensorFlow, Keras, PyTorch, Model Development & Deployment.

DQLab | *Online Course*   February 2022 – May 2023
Student

Studied Machine Learning, Algorithms, Statistics, Python, R, SQL, MS Excel, Data Science, Data Analytics, Data Engineering, Data Cleaning / Processing, Data Visualization, Regular Expressions (RegEx), Forecasting, Segmentation.

MySkill | *Online Workshop*   February 2022 – June 2022
Participant

Studied Data Analytics, Data Visualization (Google Data Studio, MS Excel), Statistics, Storytelling, and MS Excel (Pivot Table, VLookup, Excel Formulas, Data Cleaning / Processing, and Macro VBA).

TMC Undip 2021 | Semarang, Indonesia   May 2021
Participant

- TMC (Training Moderator and MC) is a training on being a Moderator and MC (Master of Ceremony) that was organized by BEM FKM Undip 2021.
- Studied Storytelling and Public Speaking, mainly focused on Intonation, Eye Contact, Body Gesture, Pronunciation, and Diction.

SKILLS

Python, R, SQL, Spreadsheets (MS Excel, Google Sheets), JavaScript, Jupyter, NoSQL, MySQL, Firebase, JSON, TensorFlow, TFLite, Keras, PyTorch, Flask, Spark, Hadoop, Tableau, Google Data Studio, Laravel, NextJS, NodeJS, ReactJS, ThingSpeak, PHP, HTML, CSS, GitHub, Git, Powershell, Linux, NPM, PIP, Machine Learning, Deep Learning, Algorithms (Prophet, SVM, SVR, KNN), Neural Networks (MobileNet, YOLO, CNN, LSTM, Backpropagation), Statistical Algorithms (L-BFGS, MCMC Sampling, HMC, NUTS, Holt-Winters), Optimization Algorithms (PSO, Grey Wolf, Bayesian Optimization), Statistical Tools (Stan), Data Sciences, Data Analytics, Data Engineering, ETL, Data Mining, Data Visualization, Data Cleaning / Processing, Data Structures, Dashboard Creation, Database, Database Management, Statistics, Linear Algebra, Forecasting / Prediction, Segmentation / Classification / Clustering, Segmentation / Cluster Analysis, Time Series Analysis, Sentiment Analysis, Object Detection, Image Segmentation, Data Scraping, Statistical Inference, Statistical Sampling, Bayesian Inference, Model Development & Deployment, Model Validation, Software Engineering, Software Testing, Frontend Development, Backend Development, Fullstack Development, CRUD, Geolocation, Responsive Web Design, Waterfall / Agile Project Management, Object-Oriented Programming, UI/UX, Figma, UML, Trello, Oracle Primavera P6, Selenium, Black-box / White-box Testing, Communications, Storytelling, Public Speaking, Presentation, English, Team Collaboration, Proactive, Credibility, Integrity, Analytical Thinking, Strategical Thinking, Philosphical Thinking, Adaptability, Time Management, Emotional Management, Orientation to Details, Success Oriented