Bayuzen Ahmad

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Summary

Seasoned Data Scientist with 4+ years of expertise in machine learning solutions, data engineering, and analytics, demonstrating proven success in leading cross-functional teams and architecting end-to-end data pipelines using Python, R, cloud platforms (GCP, AWS, Azure), and visualization tools (Tableau, Power BI) to deliver impactful business solutions through computer vision, NLP, and predictive modeling.

Experience

ISMAYA GROUP (FREELANCE)   **MAR 2023 – PRESENT**

Business Intelligence

- Engineered a comprehensive web analytics ecosystem, leveraging Selenium for automated data extraction from Google Maps, culminating in a sophisticated customer review dashboard that transformed performance monitoring across multiple Ismaya brands and subsidiaries through GCP-powered data pipeline architecture an end-to-end web scraping solution using Selenium to extract data from Google Maps, including user information, ratings, and reviews. Designed a pipeline to store this data on Google Cloud Platform and created a customer review dashboard for two Ismaya concepts (restaurant and lifestyle) andone subsidiary (Legit Group) to monitor performance ratings and customer reviews.

- Spearheaded the development of an innovative document processing system by implementing Microsoft's cutting-edge Phi-3 model, creating a robust OCR pipeline that revolutionizes text extraction from diverse document formats.

- Successfully implemented advanced fraud detection system utilizing Isolation Forest algorithm, analyzing multi-dimensional transaction patterns to identify anomalies across transaction frequencies, coin amounts, and naming variations, significantly enhancing platform security and trust.

- Revolutionized customer engagement strategies by architecting a sophisticated RFM segmentation model, driving remarkable business outcomes with 2.4x increase in customer retention and 1.2x boost in Average Order Value through data-driven campaign optimization

- Engineered a predictive analytics solution using advanced classification algorithms to forecast customer purchasing behavior, extracting actionable insights that drive strategic decision-making and sales optimization initiatives.

- Designed and deployed an intelligent product recommendation engine incorporating temporal analysis and customer segmentation, delivering personalized suggestions across five distinct time categories to maximize customer engagement and sales conversion.

- Engineered a sophisticated competitive intelligence system utilizing Beautiful Soup and Selenium for automated Grab Food platform data extraction, enabling strategic pricing decisions through comprehensive market analysis.

Altha Consulting (Project Based)   **NOV 2024 – DEC 2024**

AI Engineer

- Successfully engineered and deployed an advanced document-intelligent chatbot leveraging Google's Vertex AI Gemini Pro model, implementing sophisticated RAG architecture with LangChain framework to enable seamless PDF document analysis and contextual interactions, demonstrating expertise in cutting-edge AI technologies and large language model applications.

Semudahitu.id (Project Based)   **SEP 2024 – NOV 2024**

AI Engineer

- Architected and implemented an intelligent SQL-powered chatbot agent that revolutionizes database interactions, enabling natural language querying and automated data processing across complex databases while streamlining analysis workflows and query execution for enhanced operational efficiency.

FARMBYTE (FREELANCE)   AUG 2024 – DEC 2024

Machine Learning Engineer

- Perform web scraping on the DOSM (Department of Statistics Malaysia) website to collect agronomic pricedata.
- Developed a dashboard for monitoring using Streamlit. The project involved visualizing Machine Learning Performance and identifying Data Drifts.
- Develop a forecasting model using multiple frameworks and perform model optimization to select the bestmodel for predicting vegetable prices. Achieved a Root Mean Square Error (RMSE) between 0.1 and 1.2 with an average accuracy of 94.8%.

INSIGNIA (FREELANCE)   APR 2024 – JUL 2024

Machine Learning Engineer

- Developed an end-to-end image generation pipeline using Stable Diffusion, ComfyUI, and OpenAPI to generate text for product descriptions. Deployed the model on Askdea.ai to assist SMEs in producing high-quality images and compelling descriptions to enhance their sales.

ASTRA ISUZU MOTOR INDONESIA (PROJECT BASED)   NOV 2023 – APR 2024

Data Scientist

- Develop a time series model to predict monthly demands for over 21,000 materials with an accuracy exceeding 90%, utilizing an automated time series model selection process to identify the best models for each material.

PT SHARING VISION INDONESIA   MAR 2022 – NOV 2023

Data Scientist

- Developed a comprehensive dashboard for monitoring merchant performance, including the number of BRI and Non-BRI merchants across all regions in Indonesia, using Tableau and Looker Data Studio.
- Developed a dashboard for credit scoring monitoring using Tableau. The project involved visualizing credit score trends, identifying risk patterns, and providing actionable insights for decision-making.
- Developed an end-to-end automated machine learning pipeline using PySpark for classification tasks. The project encompassed data preprocessing, model training, and result monitoring, optimizing machine learning performance.
- Work with PT Bank Rakyat Indonesia (BRI) in the Digital Banking Development & Operations Division to support them in acquiring potential merchants by building analytics with vintage and cohort analysis, performing feature selection techniques and making model prediction.
- Use Beautiful Soup for data scraping and Selenium to automate web data scraping.
- Identify Bank Rakyat Indonesia savings customer patterns to determine whether they have a business or not by analyzing debit volume, credit volume, debit frequency, credit frequency, and analyzing customersbased on geographical conditions.
- Identify non-BRI customers who receive substantial money transfers from BRI (Bank Rakyat Indonesia) customers. The approach involves RFM (Recency, Frequency, Monetary) analysis and clustering to group customers based on their transaction patterns. The goal is to design an effective customer acquisition marketing campaign to attract potential customers to become BRI clients.

SUPERAPP   JAN 2022 – FEB 2022

Business Intelligence Analyst

- Develop and manage business intelligence solutions.
- Provide reports through office applications to improve business processes.
- Analyze business requirements and processes to generate recommendations to assist business decision.
- Create and maintain documentation including designs, requirements, and user manual.

TSINGSHANG HOLDING GROUP   **JAN 2020 – AUG 2021**
Engineering and Analyst

- Supervise the final results of the AOD (Argon Oxygen Decarburization) process.
- Material checks, evaluates chemical content, and analyzes instances where chemical content exceeds internal standards.
- Utilize statistical methods, Minitab applications, and engineering analysis for this analysis.

Mentor Experience
AI INDONESIA   **JAN 2024 – DEC 2024**
Machine Learning Mentor

- Create material and teaching machine learning Supervised and Unsupervised learning.

DIBIMBING.ID   **MAR 2023 – DEC 2024**
Data Science Mentor

- Successfully led and nurtured a troop of +30 budding data scientists in mastering the fundamentals of
- Python, empowering them with the skills needed to harness the power of data.

PT SINAR TEKNOLOGI BANGSA (BANGALORE)   **AUG 2022 – JUN 2023**
Data Science Lecturer

- Handle a class with more than 10 students to teach them about Python for Data Science, such as list, dictionary, data wrangling, and numpy.

NARASIO DATA   **AUG 2022 – NOV 2022**
Data Science Mentor

- Handle more than 5 students in small group discussions to teach and strengthen their concepts in data preparation, statistics, data transformation, machine learning models, classification, and clustering.

Skills & Abilities

- **Technical**: Mathematical Modeling, Classification, Regression, Clustering, Data Analysis and Visualization, CRISP-DM, Data Science, High Dimentional Reduction, Feature Engineering, Feature Selection, Machine Learning Optimization.
- **Software & Tools**: Microsoft Excel, Tableau, R Studio, Minitab, Python, SQL, Power Bi, DAX, Google Data Studio, PySpark.
- **Interpersonal**: Team work, Leadership, Project Management, Problem Solving, Communication.

Education

SEPULUH NOPEMBER INSTITUTE OF TECHNOLOGY   **AUG 2015 - SEPT 2019**
Bachelor of Material Engineering, GPA: 3.58/4.00

Personal Projects
MARKETING CAMPAIGN OPTIMIZATION

- **Problem**: Over the past three years, there has been a significant decrease in the conversion rate for customer acquisition. The company requires a machine learning solution for classifying customer potential to improve acquisition strategies.
- **Goals**: Develop a machine learning model capable of predicting potential customers with a high chance of conversion.
- **Result**: This project successfully increased customer acquisition by 4.3 times compared to the baseline model and reduced marketing campaign costs by 90%.

Portfolios Link: https://github.com/bayuzen19/marketing-Campaign

CUSTOMER SEGMENTATION

- **Problem**: Develop customer segmentation to determine marketing strategies. The sample dataset

summarizes the usage behavior of approximately 9000 active credit card holders over the past 6 months.
- **Goals**: Create a credit card customer segmentation estimation model to assist the company in determining marketing strategies.
- **Result**: Credit card customers are segmented into 3 clusters by using the K-Means algorithm with the Elbow and Silhouette Score as the evaluation methods.

Portfolios Link: https://github.com/bayuzen19/Clustering-Customer-Segmentation

LAPTOP PRICE PREDICTION
- **Problem**: The company want to know about laptop pricing in sales and purchases to help distributor determine the right price for the market.
- **Goals**: Build a model that can predict laptop prices.
- **Result**: The prediction has a 90.58% R-Square score by using the XGBoost algorithm.Portfolios Link: https://github.com/bayuzen19/Laptop-Price-Prediction

DASHBOARD CHURN ANALYTICS
- **Problem**: The problem is to design and develop a dashboard for monitoring churn.
- **Goals**: Create Dashboard using looker data studio.

- **Result**: link to dashboard

Certificate & Training

CERTIFIED ASSOCIATE DATA SCIENTIST   **NOV 2021**

Badan Nasional Sertifikasi Profesi (BNSP) Indonesia

FULL STACK DATA SCIENCE   **DEC 2022 – PRESENT**

iNeuron

Related coursework: Python Basic to Advance, Django Framework, Machine Learning Supervised and Unsupervised, Deep Learning for Natural Language Processing and Computer Vision, Recommendation System with Deep Learning and Machine Learning, Tableau, Power BI, Marketing Mixing Model Analysis, Hive, Impala, Spark, Kafka.

FULL STACK DATA SCIENCE   **FEB 2024 – MAR 2024**

PT. Epam Digital Mandiri

Related coursework: Advance Machine Learning, Deep Learning, Streamlit, and Deployment.

ARTIFICIAL ENGINEERING : COMPUTER VISION   **SEP 2023 – FEB 2024**

AI Indonesia

Related coursework: Deep learning, Convulutional Neural Network, AlexNet, VGG, GoogleNet, Fater RCNN, YOLO, Object Detection,Self Driving Car.

DATA ENGINEERING   **MAR 2023 – JUL 2023**

Dibimbing.id

Related coursework: Object Oriented Programming, GIT, Advanced SQL and Optimization, Airflow, Kafka andData Govermence.

BUSINESS INTELLIGENCE SPECIALIST   **MAY 2022 – AUG 2022**

Dibimbing.id

Related coursework: Business Intelligence Scenario, Exploratory Model Analysis & Model Explainability, customer segmentation using RFM and K-Means, Time Series Analytics and Forecasting, A/B Testing Uplift Modeling, Customer Lifetime Value / Marketing Channel Optimization, Casual Inference Statistics.

FULL STACK DATA SCIENCE BOOT CAMP   **OCT 2021 – APR 2022**

FullStack Data Bangalore Indonesia

Related coursework: Python, Data Wrangling, Data Preprocessing, Fundamental Statistics, Data Visualization, Machine Learning, Natural Languange Processing, Image Processing.

BUSINESS INTELLIGENCE ANALYST   **DEC 2021 – FEB 2022**

Binar Academy

Related coursework: Business Intelligence framework, Business Requirement Documents, Google Data Studio.

FULL STACK DATA SCIENCE BOOTCAMP   **AUG 2021 – DEC 2021**

Dibimbing.id

Related coursework: Python and R for Data Science, Statistics for Data Science, Data Cleaning, Data Preprocessing, Data Visualization, Supervised and Unsupervised Machine Learning, Google Data Studio.