MUHAMMAD CIKAL MERDEKA

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Dedicated entry level data analyst/scientist with a strong foundation in analytical and experimental background of Physics. My graduation in 2023, a year marked by significant breakthroughs in artificial intelligence, such as GPT-4 and other generative AI models, has sparked my curiosity and excitement to delve into the field of data. I have comprehensive grasp of data science methodology from business understanding to modelling and evaluation process with proficiency in Python, SQL, Excel, Tableau, and other tools and frameworks related to data analytics workflow from several internships, courses and bootcamps.

PROFESSIONAL EXPERIENCE

Evermos | Connected Commerce

Data Analyst Internship   *May 2024 – October 2024*

- Collaborated with cross-functional teams, including senior data analysts and finance-accounting managers, to support data preparation and validation efforts during the company audit process.
- Analyzed data related to reconciliation processes for Accounts Receivable (AR) and Accounts Payable (AP) across various business operations, utilizing mostly Python, SQL, Snowflake, Google Sheets, and Metabase on a daily basis. Additionally, gained analytics engineering experience with dbt and Apache Airflow.

Kimia Farma | Pharmaceutical & Healthcare

Big Data Analyst (Project-Based Internship)   *May 2024 – June 2024*

- Designed data marts and executed ETL process in BigQuery for the provided datasets.
- Developed a Looker Studio sales dashboard, identifying opportunities to boost sales by 22% in high-rated, low-transaction pharmacy branches and increase transaction volume by 15% in underperforming regions.
- Presented data insights to stakeholders, proposing strategies to increase sales of underperforming product categories by 12% through targeted marketing.

Bank Muamalat Indonesia | Banking

Business Intelligence Analyst (Project-Based Internship)   *April 2024 – May 2024*

- Implemented basic to advanced Excel formulas for effective data analysis in credit risks case studies.
- Executed SQL queries in BigQuery to consolidate $1.8M in sales data across multiple product categories over a 2-year period, enhancing the bank's understanding of client business performance.
- Developed a customer analysis dashboard in Looker Studio with time series sales and quantity trends, providing insights to help our corporate client reduce churn and increase retention in top-performing categories.

Bandung Institute of Technology | Research & Development

Research Assistant   *January 2021 – April 2023*

- Analyzed numerical and image experiment data from nanoparticle and solar cell characterization instruments using Origin and Excel, extracting insights on performance and conditions across experimental phases.
- Increased the peak efficiency of solar cells in the research group by 2.8% through new experiment variations.
- Developed strategies to optimize experiments duration from 2-weeks into a more efficient 3-day timeframe.
- Presented research on hybrid solar cells performance enhancement through nanoparticles at The 8th International Conference on Mathematics and Natural Sciences (ICMNS) 2023.

FEATURED DATA PROJECTS

Analytics Engineering with Airbnb | <u>Link</u>   *October 2024*
- Engineered a data pipeline in Snowflake and transformed raw Airbnb data into optimized analytical marts using dbt, implementing data quality checks and automated documentation for business reporting.
- Created executive dashboards in Preset to visualize key business metrics, reducing time-to-insight and report generation time by 30%, enabling faster, data-driven decision making for stakeholders.

Loan Prediction Based on Customer Behavior | <u>Link</u>   *April 2024*
- Enhanced credit risk assessment by analyzing business problems, gathering insights, and implementing machine learning models, while also providing valuable business recommendations to stakeholders.
- Reduced the default rate of the company from 19.55% to 7.06% and shortened the time used in manual loan processing from 6 hours to 2 minutes with a tuned random forest classification model.

Enhancing Marketing Campaigns through Customer Personality Analysis | <u>Link</u>   *April 2024*
- Created customer segmentation to analyze future campaign strategies based on customers' spending behavior, income, transaction frequency, responsiveness, and conversion rates.
- Implemented K-means clustering to identify 4 optimal customer segments and used PCA for visualization, facilitating targeted and actionable business recommendations for each group.

Complete project list can be found on my **<u>Project Repository.</u>**

EDUCATION & TRAININGS

Rakamin Academy

Data Science Specialization Bootcamp   *October 2023 – March 2024*
- Mastered core data science concepts through intensive training and applied them in comprehensive projects, covering the entire workflow from business problem definition to KPI monitoring and reporting.
- Led a team of six in developing a loan prediction machine learning application for the final project.

Bandung Institute of Technology

Bachelor of Science in Physics   *August 2018 – January 2023*
- Relevant coursewok : Data Processing and Analysis, Statistical Physics, Simulation and Modeling of Physical Systems, Computational Physics, Experimental Physics I-III, Industrial Management, etc.
- Organizations : Physics Student Association (HIMAFI) ITB, Society of Renewable Energy, ITB Student Press

SKILLS & TOOLS

- Programming Languages : Python, SQL (PostgreSQL, MySQL, Microsoft SQL Server)
- Data Manipulation and Analysis : Excel, Google Sheets, Numpy, Pandas, Polars, Regex, Scipy, Statsmodels, etc
- Machine learning and Deep Learning : Scikit-learn, Tensorflow, Keras
- Data Collection & Web Scraping : BeautifulSoup, Selenium, Requests, Nitter
- Data Visualization : Matplotlib, Seaborn, Tableau, Power BI, Metabase, Looker Studio, Preset
- Data Engineering & Transformation : dbt, Apache Airflow, Snowflake, BigQuery
- Version Control : Git - GitHub
- Other Tools : Docker, Streamlit, VSCode, Google Colab, CLI (Command Line Interface)