Philip Hadiwidjaja

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Education

University of Michigan **Ann Arbor, MI**

Bachelors of Science in Data Science *Expected Graduation: May 2027*

- **Relevant Coursework:** Data Structures and Algorithms, Linear Algebra, Probability Statistics, Discrete Math, Machine Learning, Web systems and Database management, Practical Data Science.
- **Honors and Awards:** Victor's Scholarship Award, Ward Dean Scholarship Award, U-M Smith's scholarship award

Experience

Bank BNI New York **New York, NY**

Software Engineer *May 2025 - Present*

- Engineered backend application with python to parse daily FED reports to SWIFT format, enabling pipeline of Fed reports to Actimize for easy screening by compliance team resulting in **2+ hours** of redundant manual screening
- Streamlined backend data flow by consolidating incoming/outgoing transactions in non-cloud MongoDB, automating hourly updates and reducing reporting inconsistencies by **70%**.

Bang Jaminc **Jakarta, Indonesia**

Data Scientist intern *June 2024 - Aug 2024*

- Forecasted data-driven investment decisions by forecasting regional revenue and customer retention using Python pandas and SQL, generating insight decks and strengthened pitches for **15+** potential investors and partners.
- **Built a predictive model** to forecast company growth leveraging **scikit-learn models**, and contributed to an interactive dashboard using Google Looker and Tableau, integrating real-time data to support strategic planning and stakeholder reporting.

NASA at York College **Queens, NY**

Researcher *Sep 2023 - Dec 2023*

- Conducted research as a NASA-sponsored STEM Researcher at York College, implementing **AES** and **RSA** encryption algorithms in Java using **Java.crypto**, evaluating modern data protection techniques whilst understanding best practice.
- Developed a time series forecasting model using **python** and **scikit-learn** to predict regional company growth, and integrated model outputs into **tableau dashboard**, enabling real-time strategic planning and performance tracking.

Projects

Tech Layoff ML predictor | *Python, Pandas, Sklearn, HTML, CSS, Plotly, Numpy*

- Reduced average prediction error by **10%** and achieved a **2% RMSE** by engineering new features and optimizing a complex model using multiple transformation and regression techniques to improve baseline approach
- Conducted both univariate and multivariate analysis on multiple variables, filtering un-useful variables and detecting any potential collinearity amongst to improve model performance and preventing overfitting on kaggle dataset.

SwishFeed | ***Node.js, react***

- Designed and deployed an interactive NBA dashboard, providing both live scores and historical game data to support real-time insights for basketball analysts and fans, resulting in a **50%** increase in average session duration.
- Built a high-performance backend pipeline with **FastAPI** and Node.js to stream and cache live game data from external sports APIs, reducing redundant requests by 40% and improving load reliability during high-traffic events.

Credit Card Fraud Detection | ***Python, Javascript, Matplotlib, Plotly, Sklearn***

- Built a supervised learning pipeline classifying fraudulent transactions using Kaggle-sourced credit card dataset with initial **Random Forest Classifier regression model** reaching baseline model accuracy of **91%** .
- Attained **98% precision** for final model on fraud detection by tuning hyperparameters and comparing different RMSE's of logistic regression, decision trees, and random forests accuracies leading to insightful fraudulent patterns.

Leadership and Extracurriculars

Blueprints For Pangaea | *Operations Analyst*

- Developed React and Flask web app using Retrieval-Augmented Generation and LlamaIndex to classify medical supplies with 85% accuracy, improving operational efficiency by **40%**, while enabling KPI tracking on inventory.
- Collaborated with a team of volunteers at a 501(c)(3) to assess operations, create KPIs, and implement targeted training, improving shipment accuracy and speed of surplus medical supplies to underserved regions by **25%**.

Iota Omega Epsilon | *Technology Chair*

- Revamped design of fraternity's website using React, JavaScript, and Material UI to reflect a modern and professional image, driving a **50%** increase in recruitment form submissions and **60%** increase in website traffic.
- Led a team of 5 front-end developers to implement a reusable website template to maintain design consistency and clear documentation to simplify handoffs for future tech chairs, ensuring long-term scalability.

Technical Skills

- **Languages :** C/C++, Python, Java, Kotlin, JavaScript, TypeScript, SQL, R
- **Data analysis tools:** Scikit-learn, TensorFlow, PyTorch, Keras, pandas, NumPy, Matplotlib
- **Cloud Services:** AWS EC2, Lambda, S3, API Gateway
- **Web Frameworks**: React, Vue.js, Flask, Node, Express, Django, FastAPI