Philip Hadiwidjaja

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Education

University of Michigan **Ann Arbor, MI**

BS in Data Science & Economics *Expected Graduation: May 2027*

- **Relevant Coursework:** Data Structures and Algorithms, Linear Algebra, 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 scholarship award

Technical Skills

- **Languages:** C/C++, Python, Java, Kotlin, JavaScript, TypeScript, SQL, R
- **ML/DS Tools:** Scikit-learn, PyTorch, TensorFlow, Keras, pandas, NumPy, Matplotlib
- **Data Visualization Tools:** Tableau, Google Looker, Power BI, Excel, Powerpoint
- **Web Frameworks/Tools:** React, Vue.js, Flask, Node, Express, Django, FastAPI, SwiftUI, Material UI, Tailwind CSS

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, creating a pipeline of Fed reports to Actimize for easy screening by the compliance team, saving **2+ hours** daily of redundant manual screening.
- Streamlined backend data flow by consolidating incoming/outgoing transactions in a local MongoDB database, automating hourly updates and reducing reporting and data inconsistencies by **70%**.

Bang Jamin **Remote**

Data Science Intern *Jun 2024 - Aug 2024*

- Influenced data-driven investment decisions by forecasting regional revenue and customer retention with Python Pandas and SQL, generating insight decks which were communicated to **15+** non-technical stakeholders.
- Constructed a predictive model to forecast company growth leveraging **scikit-learn models**, and developed an interactive dashboard with Looker, integrating real-time data to support strategic planning and stakeholder reporting.

NASA at York College **Queens, NY**

Researcher *Sep 2022 - Dec 2022*

- Conducted research in NASA-sponsored STEM program at York College, executing **AES** and **RSA** encryption algorithms utilizing **Java.crypto**, evaluating modern data protection techniques whilst understanding best practice.
- Gained experience in identifying software vulnerabilities through hacking methods such as **brute-force** and **injection** simulations, identifying required actions to strengthen encryption protocols and system-level security.

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 algorithm performance analysis utilizing multiple data transformations and testing various regression techniques.
- Conducted both univariate and multivariate analysis on multiple variables, filtering out non-informative variables and detecting any potential collinearity to refine model performance and preventing overfitting on kaggle dataset.

SwishFeed | *React, Node.js, FastAPI*

- 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 API from RapidAPI, reducing redundant requests by **40%** and improving load reliability.

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

- Built a supervised learning pipeline classifying **10,000+** fraudulent transactions using Kaggle-sourced credit card dataset with initial **Random Forest Classifier regression model** reaching baseline model accuracy of **88%**.
- Attained **92% precision** for final model on fraud detection by tuning hyperparameters and comparing RMSE values across logistic regression, decision trees, and random forest accuracies leading to insightful fraudulent patterns.

Leadership

Blueprints For Pangaea | *Operations Analyst*

- Developed a React and Flask web app integrating Google's **Gemini LLM**, **Retrieval-Augmented Generation (RAG)** and **LlamaIndex** classifying medical supplies with **85% accuracy** and enabling real-time KPI tracking on inventory.
- Collaborated with 10 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**, **JavaScrip**t, and **Material UI** prioritizing user experience and professional brand design, driving a **50%** increase in recruitment form submissions and **60%** increase in website traffic.
- Led 5 front-end developers to implement a reusable website template through clear documentation, structured code reviews, and weekly team check-ups to ensure maintainable code and simplifying handoffs for future tech chairs.