

# Philip Hadiwidjaja

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## Education

### University of Michigan

BS in Data Science

Ann Arbor, MI

Expected Graduation: May 2027

- **Availability:** June 23rd, 2025 - August 8th, 2025
- **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

## Experience

### Bank BNI New York

Software Engineer

New York, NY

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

Data Science Intern

Remote

Jun 2024 - Aug 2024

- Drove 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

Researcher

Queens, NY

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 and Extracurriculars

### 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**, **JavaScript**, 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.

## 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