MONIKA SEMBIRING

sembiringmonika@gmail.com | 085297526352 | https://www.linkedin.com/in/monikasembiring | https://monikasembiring.github.io

EDUCATION

Carnegie Mellon University, Heinz College   Pittsburgh, PA
Master of Information Systems Management - Business Intelligence and Data Analytics   Dec 2022
GPA of 4.02/4.33 (Highest Distinction)
Courses: Data Science & Big Data, Machine Learning for Problem Solving, Unstructured Data Analytics, Data Focused Python, Data Science for Product Managers, Database Management, A/B Testing – Design and Analysis, Applied Econometrics I, Statistics for IT Managers, Advanced Business Analytics, and Distributed Systems.
Activities: Teaching Assistant for Applied Econometrics I

Bandung Institute of Technology   Bandung, Indonesia
Bachelor of Science, Information System and Technology   Oct 2016
GPA of 3.89/4.0 (Cum Laude)

SKILLS

Programming: Python, SQL, Java
Tools: Stata, Tableau, Streamlit, Google Colab, Google BigQuery, MS SQL Server, Excel, Redash, Odoo, Power Point, Pendo
Libraries: Numpy, Pandas, Matplotlib, Seaborn, Altair, Scikit-learn, Spark, Beautiful Soup, Scrapy, MrJob, Word2Vec, Spacy
Certification: Professional Scrum Master I

ACADEMIC PROJECTS

[Python | Machine Learning] Bridge Maintenance Prioritization   Fall 2022
- Performed data cleaning, preprocessing, and exploration of 1,576 bridges in Allegheny County and number of crashes that happened on the bridges between 2004 and 2020.
- Evaluated several ML techniques: Random Forest, Gaussian Naive Bayes, KNN, Support Vector Machine, and Gradient Boosting with a specific hyperparameter tuning to predict the bridge condition category classification.
- Incorporated the classification result to a framework for government to prioritize bridge maintenance with consideration of availability of alternative routes, bridge size, traffic amount, and estimated maintenance cost.

[Python | Data Visualization] H-1B Visa Application Analysis   Fall 2022
- Performed cleaning, preprocessing, and exploration of about 3.6 million H-1B application data between 2017 and 2022.
- Created data visualization using Altair to get insights on how to have a better chance of being approved for an H-1B visa in terms of choosing an employer, negotiating salary, selecting a location, deciding a role, and processing the H-1B application.

[R | A/B Testing] Effect of Camera Use in Online Learning on Participant Performance   Fall 2021
Implemented four different regressions: Intention-to-treat (ITT) regression, Local Average Treatment Effect (LATE), LATE within LATE, and LATE with Heterogeneous causal effect to get the causal effects.

WORK EXPERIENCE

Heinz College, Carnegie Mellon University   Pittsburgh, PA
Instructional Support Staff   Jan 2023 – May 2023
- Supported instructors in assignment/project and exam creation of two courses: Data Science & Big Data and Distributed Systems
- Assisted students with their assignments/projects during Office Hours and graded the assignments/projects

NLX   New York, NY
Product Management Intern   Jun 2022 – Aug 2022
- Led product development and launch of Voice Compass Figma plugin to decrease lead time of journey creation to production for NLX's clients when they create voice assistants
- Built a chatbot guide for NLX's core product, Dialog Studio, to improve self-service in bot creation by NLX's clients
- Designed in-app guide and analytics using Pendo for Voice Compass journey creation to minimize additional assistance

Warung Pintar   Jakarta, Indonesia
Product Manager   Jan 2019 – Jun 2021
- Led a 15-person cross-functional team consisting of Data Analyst, UX Researcher, UI Designer, and Engineers to design, develop, and launch end-to-end backbone products to support the overall supply chain process
- Reduced 30% order processing time and 10% workforce cost by revamping operational application used by 300+ employees daily, enabling integration with ERP software Odoo, and providing operational dashboard and query with Redash and SQL
- Yielded 12% reduction in delivery time and 3% in delivery cost by establishing a courier application used by 350+ employees daily and providing delivery clustering using kNN with a more efficient distance for the driver
- Enabled the supply chain team to consistently maintain 85% SLA and make data-driven decisions by centralizing strategic and operational dashboard with an automatic alerting system to monitor the metrics' status

Global Digital Prima Labs   Jakarta, Indonesia
Product Manager of Catapa.com   Sep 2016 – Jan 2019

ACTIVITIES

- Vice President of Indonesian Students at CMU   Jan 2022 – Dec 2022
- Treasurer of Heinz Analytics Club at CMU   Jan 2022 – May 2022

AWARDS/PUBLICATION

Publication: Service Catalogue Implementation Model in 4th ICoICT Conference   Jul 2016
Awards: 1st Place Winner of Pitching Competition at ASES Summit Manila   Jul 2016