

# Hanzholah Shobri

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## SUMMARY

A dedicated Data Analyst at Visa Consulting Analytics, bringing up expertise in data science and analysis to improve client's credit card business and customer experience. With 5+ years of experience in finance and digital innovation, I aim to leverage my knowledge and experience to drive innovative products and services.

## EDUCATION

- **Graduate Diploma in Computer Science** Oct 2022 – Present  
*University of London* Online  
*Coursework:* Artificial Intelligence, Machine Learning, Natural Language Processing, Databases
- **Bachelor's in Industrial Engineering** Aug 2015 – Jul 2019  
*Universitas Gadjah Mada; Cum Laude* Yogyakarta, Indonesia  
*Coursework:* Operations Research, Simulation and Modelling, Decision Theory, Revenue Management

## EXPERIENCE

- **Data Analyst** Nov 2024 – Present  
*Visa Consulting and Analytics, Visa* Jakarta, Indonesia
  - **Credit Card Portfolio Analysis:** Conducted in-depth credit card portfolio analysis to identify key spending patterns, customer segments, and profitability drivers. Insights were used to shape targeted marketing strategies, optimize campaign execution, and improve engagement across high-value and underpenetrated customer groups.
  - **Performance Dashboard:** Developed and maintained a regional Power BI dashboard to monitor cross-border transaction performance against annual KPIs, enabling country-level account executives and leadership teams as a critical tool for early detection of performance gaps and corridor-specific issues, enabling timely strategic actions and focused client engagement.
  - **Card Authorization Monitoring:** Performed in-depth analysis of client's credit card authorization using internal tools to address key issues for suboptimal approval rate. Delivered regular data-driven insights and updates as well as supported implementation of measures to ensure smooth and streamlined end customer experience.
- **Payment System Analyst/Researcher** Feb 2020 – Oct 2024  
*Payment System Policy Department, Bank Indonesia* Jakarta, Indonesia
  - **Policy Research:** Conducted multiple in-depth research initiatives in financial market infrastructures to guide policy formulation for supporting Indonesia's digital economic development, assessing strategic topics such as central bank digital currency (CBDC), cross-border & multicurrency payment systems, modern technologies (AI & API), and global data/message standards (ISO 20022 & LEI).
  - **Data Analysis:** Managed extensive payment system data from various sources, organizing it into a streamlined database system that enhanced team efficiency and data accessibility. Utilized statistical modeling and machine learning to analyze data and forecast trends, providing valuable insights. Created impactful visualizations and detailed reports that enabled executives to make informed strategic decisions.
  - **Payment System Simulation:** Conducted in-depth assessments of liquidity saving mechanism (LSM) designs to optimize liquidity management for commercial bank large-value payment transfers via enhanced settlement mechanisms. Used the BoF-PSS3 simulation software and of historical payment data to formulate evidence-based recommendations, which are pivotal to the renewal of the BI-RTGS System.
- **Market Research Intern** Jan 2019 – Feb 2019  
*Industrial Business Division, PT Pindad Persero* Bandung, Indonesia
  - **Feasibility Analysis:** Performed a comprehensive feasibility study on the mini excavator product using PORTER, PEST, & SWOT analyses, identifying key market opportunities and strategic adjustments. These informed the product development strategy and marketing positioning, enhancing competitive readiness.
  - **Customer Survey Improvement:** Critically assessed and enhanced the reliability and validity of the 2019 customer satisfaction survey on mini excavators' after-sales services. Provided critical insights to guide future enhancements in survey methodologies and service strategies.
  - **Document Management Support:** Organized and maintained market research documents for the business industrial division. Streamlined document filing systems and assisted with the digitalization of records to improve accessibility and efficiency.

## PROJECTS

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- **PSSimPy – a Python-based Payment System Simulator Library** (2024 – Present) [\[Home\]](#) [\[Paper\]](#)
  - Co-authored and maintained an open-source research tool for simulating large-value payment systems, published as a Python package. Offering researchers and central bankers a highly flexible and customizable platform, equipped with modular infrastructure, that can support critical tasks in designing and evaluating payment systems.
- **Modernization of BI-RTGS System** (2020 – Present) [\[Home\]](#)
  - Involved in formulating the conceptual design of a robust large-value payment system in the digital era, as a Systematically Important Payment System that processes about 90% of all transactions in the country by value. Undertook detailed data gathering, analysis, and visualization (e.g., forecasting, literature review, survey and FGD); brought insights on domestic payments landscape & global trends in technology and policy.
- **Project Garuda – the Initiative of Digital Rupiah Development** (2022 – 2023) [\[Home\]](#)
  - Contributed as a member of Project Garuda team, driving the development of the nation's currency in digital format (CBDC) under Bank Indonesia's initiative in responding to global trends in digitalization of payments. Conducted literature studies & benchmarking and assisted stakeholders engagement & public communications. Co-authored the project's [White Paper](#), [Consultative Paper](#), and [Public Consultation Report](#).
- **G20 TechSprint 2022 – a Global CBDC hackathon** (2022) [\[Home\]](#)
  - Participated in the organizing committee, comprising representatives from Bank Indonesia and the BIS Innovation Hub. Successfully organized a global hackathon on CBDC during the Indonesian G20 Presidency 2022, attracting hundred international participants, inviting 11 CBDC experts from academics and industry, and distributing over IDR 5 Billion in prizes. Managed communication with finalists & experts and drafted the final speech of the Governor of Bank Indonesia at the closing event.

## RESEARCH AND PUBLICATION

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- See, K., Shobri, H., and Garcia, N., 2024, PSSimPy: A Design Science Approach to Constructing and Implementing a Large-Value Payment System Simulator.
- Bank Indonesia, 2023, Public Consultation Report Project Garuda: Wholesale Digital Rupiah Cash Ledger.
- Bank Indonesia, 2023, Consultative Paper Project Garuda: Wholesale Digital Rupiah Cash Ledger.
- BI-DKSP, 2023, Evaluating ISO 20022 Standard for Nationwide Adoption (internal policy note).
- Bank Indonesia, 2022, White Paper Project Garuda: Navigating The Architecture Of Digital Rupiah.
- BI-DKSP, 2022, Simulating Liquidity Saving Mechanisms with BI-RTGS Transaction Data (internal policy note).
- BI-DKSP, 2021, Assessing the Operational Policy of the BI-RTGS System (internal policy note).
- BI-DKSP, 2020, Technological Considerations in Developing Large-Value Payment Systems (internal policy note).

## ADDITIONAL INFORMATION

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**Languages:** Indonesian (Native); English (Professional, IELTS Band 7.5).

**Achievements:** Finalist of Data Mining Competition by Joints, Ilmu Komputer UGM (2019, top 10); Semi-finalist of Industrial Challenge by HMTI ITS (2018, 6th place).

**Certifications:** TensorFlow Developer Certificate, TensorFlow (2023, [Credential](#)); Software Developer – Programmer, Indonesian Professional Certification Authority (BNSP) (2021, [Credential](#)).

### Technical Skill

- Data Analysis and Visualization (Power BI, MicroStrategy, Tidyverse, ggplot2, Pandas, NumPy)
- Databases (MySQL, PostgreSQL, SQLite)
- Machine Learning and Deep Learning (Scikit-learn, PyTorch, TensorFlow2)
- Natural Language Processing (NLTK)
- Payment System Simulation (BOF-PSS3, PSSimPy)
- Programming (R, Python, Julia, Javascript, SQL)