

Hanzholah Shobri

🏠 Tangerang Selatan, Banten, Indonesia | ✉️ hanzholahs@gmail.com
🌐 github.com/hanzholahs | 🔗 linkedin.com/in/hanzholahs | 🌐 www.hanzhs.com

SUMMARY

Analyst at Bank Indonesia, deeply engaged in advancing of Indonesia's large-value payment system and central bank digital currency. Bringing a extensive skill set, encompassing data analysis, AI/ML, simulation, databases, and research, I aim to leverage my expertise to develop innovative products and services. For personal projects and further insights, visit my personal website at hanzhs.com.

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 (GPA: 3.56 / 4.00) Yogyakarta, Indonesia
Coursework: Operation Research, Simulation and Modelling, Decision Theory, Revenue Management

EXPERIENCE

- **Payment System Analyst** Feb 2020 – Present
Payment System Policy Department, Bank Indonesia Jakarta, Indonesia
 - **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.
 - **LSM Simulation:** Conducted in-depth assessments of liquidity saving mechanism (LSM) designs to optimize reserve utilization for commercial bank large-value payment transfers via enhanced settlement mechanisms. Used the BoF-PSS3 simulation software and four months of historical payment data to formulate evidence-based recommendations, which are pivotal to the renewal of the BI-RTGS System.
 - **Policy Research:** Conducted multiple in-depth research initiatives in financial market infrastructures to guide policy formulation and support Bank Indonesia's payment system 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).
- **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

- **PSSimPy – a Payment System Simulator Library** (2024 – Present) [\[Home\]](#)
 - 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.
- **Web-based Design Application for Batik 4.0 (2019)** [\[Home\]](#)
 - Designed an application to assist the design process of Batik (a traditional Indonesian fabrique), serving as a foundation of automated Batik production in the era of Industry 4.0. Submitted the application for a copyright for its innovation in leveraging keywords that describe the essence philosophy of particular Batik motifs in the design process and implementing web technologies. The application was developed using PHP & MySQL (back end) and vanilla Javascript, HTML, & CSS (front end).

RESEARCH AND PUBLICATION

- 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

Languages: Indonesian (Native); English (Advanced, IELTS Band 7.5); Arabic (Beginner).

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](#)).

Events and Volunteering

- Committee of Hackathon Bank Indonesia 2024 (2024)
- Science and Engineering Student Coordinator of KKN-PPM UGM Subulussalam (2018)
- Chief of Committee of Industrial Engineering Students Batch 2015 Industrial Visit (2018)
- Chief of Committee of 'Ramadhan di Kampung Pagutan' (2016)

Technical Skill

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