

SAYYIDAH HUMAIRAH

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SUMMARY

A motivated Biomedical Engineering master's student specializing in AI, data science, and image processing. Experience & interests in data-driven research & applying machine learning model to medical related challenges. I aim to demonstrate adaptability, analytical thinking, and a proactive approach to learning and collaboration in multidisciplinary environments.

EDUCATION

Erasmus Mundus Joint Master in Biomedical Engineering – Serbia, Greece, Romania

2024 – 2026

Master's in biomedical engineering (CGPA: 9.3/10.0)

- Consortium: University of Kragujevac, University of Patras, University of Medicine & Pharmacy Grigore T. Popa, Romania
- Coursework: Image & Biosignal Processing, Bioinformatics, Biofluid mechanics, Translational Medicine, Biomedical Instrumentation & Measurement
- Selected Projects:
 - Automatic Hippocampus Gland Segmentation using U-Net Architecture
 - Computational Fluid Dynamics Simulation & Blood Flow Analysis in Carotid Arteries
 - Two Way Sign Language Interpreter with Smart Gloves & Audio Identification - ongoing

Universitas Pembangunan Nasional “Veteran” Jawa Timur – Surabaya, Indonesia

2020 – 2024

Bachelor of Computer Science, in Informatics (GPA: 3.87/4.00)

- Coursework: Algorithm, Database, Linear Algebra, Statistics, Artificial Intelligence
- Thesis Project: Breast Cancer Detection Based on Synthetic Ultrasound Images using Wasserstein Generative Adversarial Networks & Transfer Learning

University of Twente – Enschede, Netherlands

2022 – 2023

Exchange Program - Minor in Geographic Information System & Earth Observation

- Coursework: Geographic Information System, Data Analysis, Remote Sensing, Machine Learning
- Projects: Noise Pollution Mapping in Volkspark using QGIS | Digital Twin of Langezijds Faculty Building using Unity & Metashape

WORK EXPERIENCE

Laboratory of Biomechanics and Biomedical Engineering – Patras, Greece

08/2025 – 12/2025

Research Intern

- Set up & ran 700+ 3D simulations of blood flow in coronary arteries of 179 patients (RCA, LAD) in ANSYS; exported necessary data, including coordinates & simulated wall shear stress (WSS)
- Cleaned & standardized the exported arteries data, extracting features for the model
- Build a deep learning model with UNet architecture to estimate wall shear stress of coronary, aimed for quick detection for risks of atherosclerosis

KJPP RHR Valuation & Advisory Services (Strategic Alliance Of CBRE) – Jakarta, Indonesia

03/2024 – 06/2024

Data Scientist Intern

- Collected apartments data from 50+ primary data sources in 2024 Quartal 1; and designed new pipeline for automatic data exporting from raw form to be ready for IT team
- Built Automated Valuation Model (AVM) for apartment pricing prediction for 3 targeted cities: Jakarta, Tangerang, and Bekasi
 - Exploratory data analysis to extract insights and identify key trends from structured and geospatial data using GeoPandas to incorporate spatial intelligence into predictive valuation models
 - Statistical analysis with Linear Regression model for explainability & 4 machine learning models as result: Random Forest, SVM, XGBoost, final voting model

Artificial Intelligence and Medicine Research Group – Surabaya, Indonesia

10/2023 – 03/2024

Research Intern

- Assisted research on AI models & algorithms and the implementations on the medical field; mainly involved in data processing & analysis, literature review, work design, and writing.
- Published work: Abnormality Determination of Spermatozoa Motility Using Gaussian Mixture Model and Matching-based Algorithm (doi.org/10.18196/jrc.v5i1.20686, *co-author*).

ORGANIZATION & VOLUNTEER EXPERIENCE

LPDP Business Competition 2024 Region Jakarta & Depok – Jakarta & Depok, Indonesia

Head of Event Division

05/2023 – 06/2023

- Organized a regional business competition sponsored by the Indonesian Ministry of Finance with 400 participants involved in the 3-day event

IISMA University of Twente – Enschede, Netherlands

08/2022 – 02/2023

Media Division

- Conceived cultural promotional events “A Taste of Nusantara” and “Batik Challenge” that was attended by 50+ international students from every continent around the world; documented, edited, and published media of conducted activities for reporting

AWARD

Indonesian International Student Mobility Awards (IISMA)

08/2022 – 02-2023

Ministry of Education, Culture, Research and Technology scholarship scheme to fund Indonesian students for multidisciplinary mobility program at top universities overseas

International Credit Transfer (ICT)

2021

Ministry of Education, Culture, Research and Technology scholarship scheme to fund Indonesian students for studying in an international university partnering with current university

ADDITIONAL

Hard Skills: Python (Pandas, Numpy, Scikit, OpenCV, Tensorflow, PyTorch), C, ANSYS CFX, SQL, Microsoft Office, Google Platform, QGIS

Soft Skills: Teamwork, Project Management, Communication, Proactive

Certification: IELTS (C1, Score: 7); Summer Program in Image Processing & AI (Asia University); Data Science with R, SQL, and Python (DQLab)