

# SAYYIDAH HUMAIRAH

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## SUMMARY

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

## EDUCATION

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**Erasmus Mundus Joint Master in Biomedical Engineering – Serbia, Greece, Romania** 2024 – 2026

*Master in Biomedical Engineering (CGPA: 9.3/10.0)*

- Consortium: University of Kragujevac, University of Patras, University of Medicine & Pharmacy Grigore T. Popa, Romania
- Coursework: Bioinformatics, Biosignal & Image Processing, Biofluid mechanics, Biomedical Instrumentation & Measurement
- Selected Projects:
  - Hybrid GO & Homology Contrastive Fine-Tuning for Multilabel Protein Function Prediction
  - Automatic Hippocampus Gland Segmentation using U-Net Architecture
  - Computational Fluid Dynamics Simulation & Blood Flow Analysis in Carotid Arteries

**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

**University of Twente – Enschede, Netherlands** 2022 – 2023

*Exchange Program - Minor in Geographic Information System & Earth Observation*

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

## WORK EXPERIENCE

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**Laboratory of Biomechanics and Biomedical Engineering – Patras, Greece** 07/2025 – Present

*Research Intern*

- Handling 700+ number of 3D simulations of blood flow in coronary arteries of 200 patients
- Building deep learning model 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
  - Performed exploratory data analysis to extract insights and identify key trends from structured and spatial datasets
  - Geospatial approach for feature engineering 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, voting model

**Artificial Intelligence and Medicine Research Group – Surabaya, Indonesia** 12/2023 – 07/2024

*Research Intern*

- Conducted research on AI models and algorithms on various problems, with focus on medical field
- Published works: Improving Classification Accuracy of Breast Ultrasound Images Using Wasserstein GAN for Synthetic Data Augmentation ([doi.org/10.18196/jrc.v6i4.25075](https://doi.org/10.18196/jrc.v6i4.25075)) | Abnormality Determination of Spermatozoa Motility Using Gaussian Mixture Model and Matching-based Algorithm ([doi.org/10.18196/jrc.v5i1.20686](https://doi.org/10.18196/jrc.v5i1.20686))

## ORGANIZATION & VOLUNTEER EXPERIENCE

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### **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

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### **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

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**Hard Skills:** Python, Tensorflow framework, C, ANSYS, SQL, Microsoft Office Suites, 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)