

MUHAMMAD HAFEZ AL - ASSAD

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PROFILE

Passionate Computer Engineering graduate with a focus on AI, IoT, image/audio processing, and Big Data analysis. Notable achievements include winning first place at the IARC Hackathon 2023, earning a Bronze Award in the IMT-GT Virtual Innovation Competition 2023, and being a recipient of the Creativity Student Funding Program (PKM) in 2023. Proficient in graphic design and known for open-mindedness and strong networking skills. Eager to contribute to innovative projects and eager to connect with professionals in the technology sector. Additionally, proficient in using the Microsoft Office Suite.

EDUCATION

BACHELOR OF COMPUTER ENGINEERING / GPA: 3.75

September 2019 – November 2023 / Universitas Syiah Kuala / Indonesia

COURSE AND CERTIFICATION

Indonesian Professional Certification Authority / 2024 / IoT-Based Embedded System Programming

Indonesian Professional Certification Authority / 2024 / Associate Data Scientist

Indonesian Professional Certification Authority / 2024 / Software Development Programmer

AWS & Dicoding / 2024 / AWS Cloud and Back-End Academy

RevoU / 2024 / RevoU Mini Course Data Analytics

Synergi Academia 2021 / Course Certified Ethical Hacker EC-Council Synergi Academia

Progate / 2020 / Course in SQL Programming with Progate Indonesia

Progate / 2020 / Course in Git with Progate Indonesia

Progate / 2020 / Course in Command Line with Progate Indonesia

WORK EXPERIENCE

BUSINESS APPLICATION OPS PT. ASDP INDONESIA FERRY (PERSERO)

July 2024 – Present / Jakarta, Indonesia

- Manage online ticketing databases and office and port servers, handling maintenance, troubleshooting, and backups to ensure continuous, optimized operations
- Oversee IT assets and IoT devices like barrier gates, ensuring functionality, maintenance, and compliance with security standards at office and port locations
- Continuously monitor systems, generate performance reports, and provide technical support to quickly resolve software and hardware issues
- Implement and maintain security protocols, ensuring all systems meet IT security standards to protect data and infrastructure

INTERNSHIP / CBR SOI ASIA – SECTION CBR3B

January 2023 – Februari 2024 / Japan (Online)

- Developing a fruit quality sorting system based on Deep Learning and Internet of Things (IoT)
- Conducting Needs Analysis such as primary research and secondary research
- Collecting primary dataset in the form of fruit images
- Analyzing the best deep learning architecture
- Developing edge AI on Smartphone
- Designing and assembling the required IoT components for the system
- Ensuring good integration between hardware and software
- Creating UI/UX Design for Mobile Applications and Developing using Flutter Framework
- Creating Graphic Designs
- Preparing Monthly Progress Reports
- Participating in key project milestones, including the kick-off meeting at Universitas Brawijaya, Malang, and the interim report meeting at Universiti Sains Malaysia, Penang

INTERNSHIP / PLN UNIT INDUK DISTRIBUSI ACEH

Agustus – September 2022 / Banda Aceh, Aceh, Indonesia

- Learning and working under the guidance of the Finance Division to acquire basic knowledge about PLN UID Aceh.
- Developing a web-based Facility Inventory Data System, contributing to streamlined tracking and management processes.
- Studying and practicing the functions and roles of the IT Team in the environment of PLN UID Aceh
- Assisting with administrative activities such as inputting data into the database and other administrative files using the Microsoft Office Suite
- Responsible for problem-solving technical difficulties related to hardware and software for employees

COMPUTER LABORATORIUM ASSISTANT / UNIVERSITAS SYIAH KUALA

June – December 2021 / Banda Aceh, Aceh, Indonesia

- Delivered Python programming lessons, emphasizing basics, problem-solving, and debugging.
- Conducted sessions on Object-Oriented Programming (OOP) principles in Python.
- Instructed database design, normalization, and SQL using Python libraries.
- Assisting students in understanding programming concepts, explaining syntax, and providing tips for completing assignments
- Assisting in administrative activities in Programming courses
- Helping to develop learning programs
- Assisting in assessing programming assignments, providing points for correct solutions, and giving constructive feedback
- Moderating and participating in online discussion forums to answer student questions and facilitate discussions
- Managing computer laboratories including hardware and software
- Ensuring smooth operation of computer laboratories, providing technical assistance to students, and ensuring availability of required software

ORGANIZATIONAL EXPERIENCE

INTRA CAMPUS

- INFOKOM Division Member of the Student Executive Board (BEM-FT) of the Faculty of Engineering at Syiah Kuala University. 2022
- Chairperson of the Public Relations Division of the Computer Engineering Student Association (HIMATEKKOM) at Syiah Kuala University. 2022

- Chairperson of the Embedded System & Internet of Things Division of the Seulanga Community at Syiah Kuala University. 2022
- Member of the Secretariat and Household Division of the Wadah Aspirasi dan Apresiasi Seni Aneuk Teknik (WASIAT-FT) at Syiah Kuala University. 2022

EXTRA CAMPUS

- Member of the Research and Statistics Division of the Gerakan Mengajar Desa Indonesia Chapter Aceh. 2021 - 2023
- Inspirational Tutor of the Gerakan Mengajar Desa Aceh. 2021 - 2023
- Chairperson of the Communication Division of Katalisator Muda Indonesia Chapter Aceh. 2021 - 2022
- Member of the Program Division of Katalisator Muda Indonesia Chapter Aceh. 2020 - 2021

ACHIEVEMENT

Awardee Funding Program Kreativitas Mahasiswa (PKM) 2023

November 2023 / Jakarta, Indonesia

- Accepting Grants from the Submission of 2 Student Creativity Program Proposals under the Karsa Cipta Scheme by the Directorate of Learning and Student Affairs (Belmawa) of the Ministry of Education, Culture, Research, and Technology. The proposals are titled 'Internet of Things and Deep Learning-Based Watermelon Quality Detection with Sound Absorption Method to Improve Harvest Quality' and 'Design of Pineapple Fruit Quality Classification System Using Deep Learning-Based Sound Absorption Method'.

Bronze Award / IMT GT VIRTUAL INNOVATION COMPETITION 2023

September 2023 / Batam, Indonesia

- Won Bronze Award in an IMT GT Virtual Innovation Competition on developing *Artificial IoT to Classify and Predict the Quality of Produce in Smart Agriculture*.
- Innovation product submitted was a multi-fruit sorting system that utilizes Artificial Intelligence of Things to recognize visual patterns and combines them with sound absorption methods to classify and predict the sweetness level and grade of fruits.

Student Presenter / 56th AI3 and SOI Asia Joint Meeting

September 2023 / Penang, Indonesia

- Selected as one of the student presenters for the 56th AI³ & SOI Asia Joint Meeting at Universiti Sains Malaysia (USM), Malaysia, this event was attended by various members of the academic community from several leading universities in Asia. The main topic focused on global technological advancements.

1st PLACE SPECIAL CATEGORY / INDONESIA AI RESEARCH CONSORTIUM (IARC) HACKATHON 2023

January 2023 / Jakarta, Indonesia

- Won 1st place special category in an Indonesia AI Research Consortium (IARC) Hackathon 2023 on developing *Fruit Quality Classification of Pineapples Based on Acoustic Impulse Response using Deep Learning and Internet of Things*.

SKILLS AND EXPERTISE

Skills:

- Programming Languages: Python
- Web Development: HTML, CSS, JavaScript
- Mobile App Development: Flutter, Dart
- Data Processing: SQL, Excel, Python (pandas, numpy)
- Graphic Design: CorelDRAW, Adobe Photoshop, and Adobe Illustrator
- Web Design: Figma
- Microsoft Office Suite: Word, Excel, PowerPoint, Outlook
- Soft Skills: Communication, Leadership, Teamwork

Expertise:

- Software Development: Desktop, Web, Mobile Apps
- Computer Architecture: Microprocessors, Operating Systems, Computer Networks
- Artificial Intelligence Systems Development: Machine Learning, Deep Learning, Natural Language Processing
- Hardware Development: Computer Hardware Design, Analysis, Programming
- Project Management: Planning, Execution, IT Project Evaluation
- Deep Learning/Machine Learning Development: TensorFlow, PyTorch
- Algorithms and Techniques: CNN, RNN, Reinforcement Learning
- Applied Experience: Image Classification, Speech Pattern Recognition, Text Analysis
- Data Preprocessing: Data Normalization, Data Augmentation
- Evaluation and Optimization: Cross-Validation, Hyperparameter Tuning

PUBLICATIONS AND JOURNALS

Muchallil, S., Roza, S., Al-Assad, M.H., Candra, Y., Fitria, M., Dawood, R. (2023). "Deep Learning Implementation for Pineapple Sweetness Classification." In: Anutariya, C., Bonsangue, M.M. (eds) Data Science and Artificial Intelligence. DSAI 2023. Communications in Computer and Information Science, vol 1942. Springer, Singapore. https://doi.org/10.1007/978-981-99-7969-1_14.

Fitria, M., Candra, Y., Al-Assad, M.H., Roza, S., Dawood, R. (2023). "A Deep Learning-Based Model for Classifying Sweetness Level of Sky Rocket Melon: A Preliminary Result," in: Proceedings of the 2023 2nd International Conference on Computer System, Information Technology, and Electrical Engineering (COSITE), Banda Aceh, Indonesia, 2023, pp. 204-209. <https://doi.org/10.1109/COSITE60233.2023.10250114>.

Fitria, M., Al-Assad, M. H., Candra, Y., Roza, S., & Dawood, R. (2023). Preliminary Results of a Deep Learning Model for Classifying Watermelon Sweetness Through Field-Spot Detection. In e-Proceedings Book of 1st International Conference of Business and Technological Advances in Industrial Revolution 4.0 (pp. 43-57). Retrieved from <http://www.icobta.net/>. https://konten.usu.ac.id/storage/satker/YYaSE/documents/ICOBTA-e-proceeding_compressed.pdf
