

# Mohammad Rifqi F.

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 <https://github.com/rifqifarhansyah>

## RESEARCH INTERESTS

**Computer Vision** (Pattern matching and analysis).

**Networks System** (5G; WiFi 6/802.11ax; Random Access; RAN Intelligent Controller; ).

**Machine Learning** (Systems and networks predictability).

**Artificial Intelligence (AI)**

**Unmanned Aerial Vehicle (UAV)**

## EDUCATION

2021- Present School of Electrical Eng. and Informatics, **Institut Teknologi Bandung (ITB)**, Bandung, Indonesia, **Current GPA : 3.58 out of 4.0**.

2018- 2021 SMA N 1 Magelang, Magelang Indonesia, Achievement: **1<sup>st</sup> Place as Best Graduate Student** of Natural Science Department (**3.64 out of 4.0**)

2015- 2018 SMP N 1 Muntilan, Magelang Indonesia, Achievement: **2<sup>nd</sup> Place in National Examination** that held by Indonesian Ministry of Education (**38.0 out of 40.0**)

## EXPERIENCE

- Aug 2023- Present **Computer Engineering Laboratory Assistant**, Bandung, Indonesia
- Selected from 60+ applicants and chosen as ITB Linear Algebra and Geometry Assistant Course for 2023/2024.
  - Have responsibilities to create specification for class projects, assist lecturer in supervising exams, and also assess the quiz results.
- Mar 2023- Present **International Team for Aksantara ITB VTOL Division**, Bandung, Indonesia
- Chosen as Aksantara ITB delegation for Autonomous Drone-D2 Category of Singapore Amazing Flying Machine Competition (SAFMC) 2023.
  - Assigned as Vertical Take-Off and Landing (VTOL) Programmer for Aksantara ITB 2023/2024.
  - Have responsibilities to make a system using OpenCV for drone.
- Feb 2023- May 2023 **IT Infrastructure at Perum Perhutani**, Bandung, Indonesia
- Chosen as 1 out of 100+ applicants of Global Talent Internship Program that held by the Ministry of State-Owned Enterprises (BUMN Indonesia).
  - Have responsibilities to build a website for perhutani, take a part in perhutani's another project, etc.
- Feb 2022- Present **Undergraduate Research Program at Garuda Ilmu Komputer (GIK) Lab**, Bandung, Indonesia
- GIK Lab was formed to prepare Indonesian students who are bright and passionate about building the nation to be able to continue their studies at world-class universities, especially in the United States, around Computer Science and Engineering.
  - In this preparatory program, Indonesian students will conduct joint research with leading international professors in the United States.
  - Supervised by Mr. Fadhil Kurnia (CS Ph.D. student @Umass Amherst)
- Jan 2023- Mar 2023 **TEEP Research Internship Program**, Bandung, Indonesia
- A remote research internship for talented international students in collaboration program at BMW Lab, NTUST.
  - Focused on studying RAN architecture, 5G, and RAN Intelligent Controller (RIC).
- Aug 2022- Dec 2022 **Computer Labs Assistant (Comlabs -USDI ITB)**, Bandung, Indonesia
- Chosen as 1 out of 500+ applicants to guide 35+ practitioners in doing practicum regarding python.
  - Have responsibilities to teach the practitioners, rate their assignment, and give advice to them.
  - Skills: Algorithms, Python (Programming Language), etc.
- Jan 2022- Aug 2022 **Pre-Research Intern at NTUST**, Bandung, Indonesia
- This is a remote research mentorship program for talented international students in collaboration at BMW Lab, NTUST.
  - Focused on studying Random Access, WiFi 7, and 802.11ax; also having responsibility to make weekly report and assignment that teach me to stay productive.
  - Supervised by Prof. Ray-Guang Cheng.

## AWARDS

Scholarship	<b>Granted scholarships for monthly expenses</b> from AKABRI 67-70 Foundation.	2021
Scholarship	<b>Granted a full scholarship for my tuition fees</b> during my study in Institut Teknologi Bandung. The details can be looked at the official website: <a href="http://kip-kuliah.kemdikbud.go.id/">kip-kuliah.kemdikbud.go.id/</a>	2021

## COMPETITION

Bronze	International	<b>Singapore Amazing Flying Machine Competition (SAFMC) 2023.</b> VTOL competition that held by <b>DOS Research Institution in Singapore.</b>	2023
1 <sup>st</sup> Place	National	<b>Ruangguru Champion Season.</b> Academic Olympiad that held by <b>Ruangguru Company</b> , won USD1000.	2019
1 <sup>st</sup> Place	Regional	<b>Kompetisi Sains Nasional (KSN)</b> , in <b>Physics</b> at first stage. Physics Olympiad that held by <b>Indonesian Ministry of Education.</b>	2019
1 <sup>st</sup> Place	Regional	<b>Lomba Debat Bahasa Indonesia (LDBI)</b> , <b>Best Speaker</b> at first stage. Indonesian Language Debate Contest that held by Indonesian Ministry of Education.	2019

## DIGITAL PROJECT EXAMPLE

### Chat-GPT Lite ( <https://github.com/rifqifarhansyah/ChatGPT-Lite> )

- This project is associated with Algorithm Strategy course of STEI, ITB.
- In this program, we can ask the ChatBot some question and he will give us the answer depends on String Matching and Regex process behind it. The features that have been implemented are calculator, add/delete question, day predictor, etc.
- I have contributed to design and implement user interface from the website, arrange the report, and connect the UI with some related functional method or procedure.

### Batik Pattern Classification ( <https://github.com/rifqifarhansyah/Batik-Pattern-Classification> )

- This project is associated with Discrete Mathematics course of STEI, ITB.
- In this program, I made a program to analyze the pattern from input image and then compare them with the training image.
- I utilize global feature extraction to take the pattern, texture, and colour allocation from every batik picture. The database of this program have been specified by me, about 80 pictures. In this program, I add 4 database of indonesian batik pattern (parang, nitik, ceplok, lereng).

### EigenFace Recognition with Python GUI ( <https://github.com/rifqifarhansyah/EigenFace-Recognition> )

- This project is associated with Geometry and Linear Algebra course of STEI, ITB.
- In this program, we can upload our photo or use the webcam to take a realtime photos.
- The result of comparison between the uploaded photo with the eigen face database.
- I have contributed to make an User Interface with Python GUI. The libraries that I used to construct this project are CustomTkinter (version 4.6.3), PIL (version 8.4.0), Tkinter (version 8.6), and FPDF (version 1.7.2).

## REFERENCE

<b>Ray-Guang Cheng</b>	Distinguished Professor, Electronic and Computer Engineering, NTUST-Taiwan, <a href="mailto:crg@mail.ntust.edu.tw">crg@mail.ntust.edu.tw</a>
<b>Fadhil I. Kurnia</b>	Computer Science Ph.D Student, Manning College of Information and Computer Science, Univeristy of Massachusetts Amherst, <a href="mailto:fikurnia@cs.umass.ed">fikurnia@cs.umass.ed</a>

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I declare the details stated to be true and complete.  
(CV updated on August 19, 2023)