

## APPENDICES

### Appendix 1. Letter of Acceptance



No : BA24-1/LoA/XXIV-02/M737D4KY2637  
Re : Letter of Acceptance

Dear Caku,

Following your registration and our subsequent rigorous selection process, we are pleased to inform **you that you are officially a Bangkit Academy 2024 batch 1 participant** with the following details.

Name	: Caku
NIM (Nomor Induk Mahasiswa)	: 200407124
Campus	: STKIP Persada Khatulistiwa
Study Program	: Pendidikan Bahasa Inggris
Registered Supervisor	: Sijono, M.Pd
Bangkit ID	: M737D4KY2637
Learning Path	: Machine Learning
Program Period	: 16 February - 31 July 2024

Bangkit is a Google-led career readiness program held in collaboration with Gojek, Tokopedia, and Traveloka. Affiliated with Studi Independen Bersertifikat - Kampus Merdeka, this program runs in the even semester of 2024.

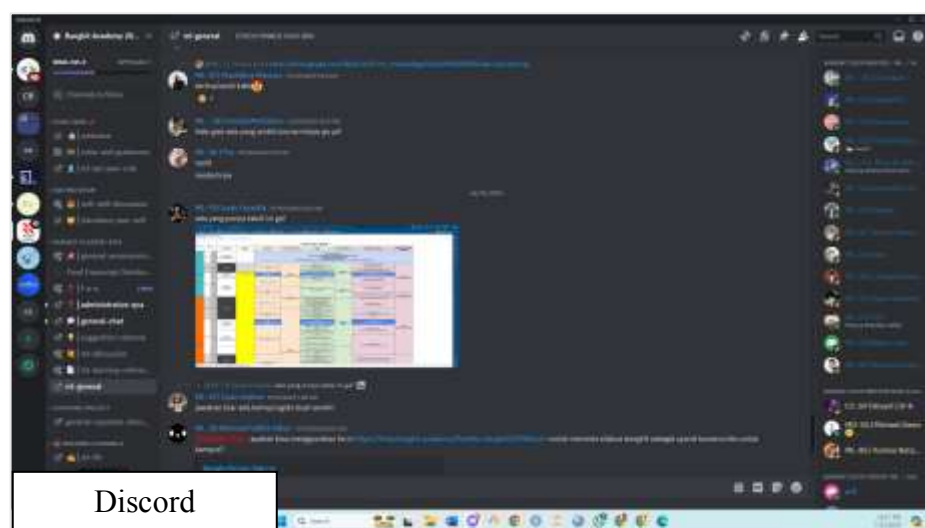
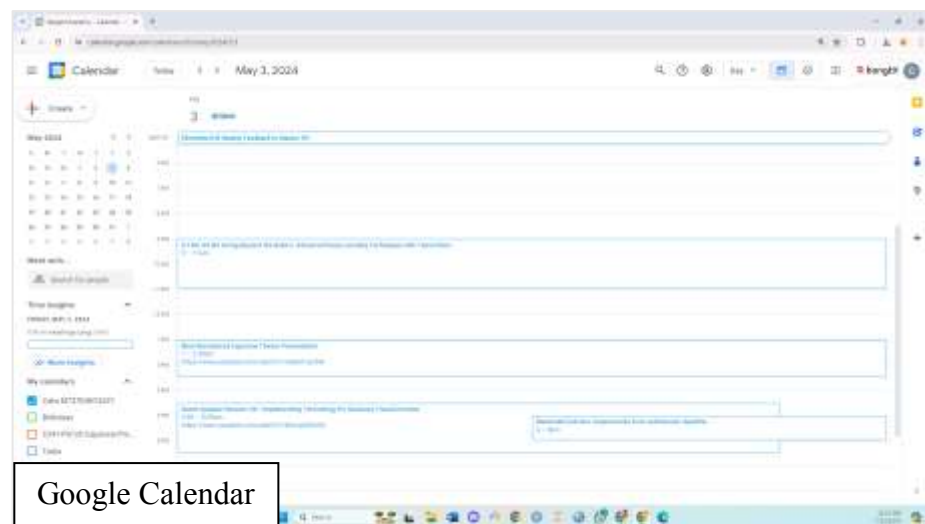
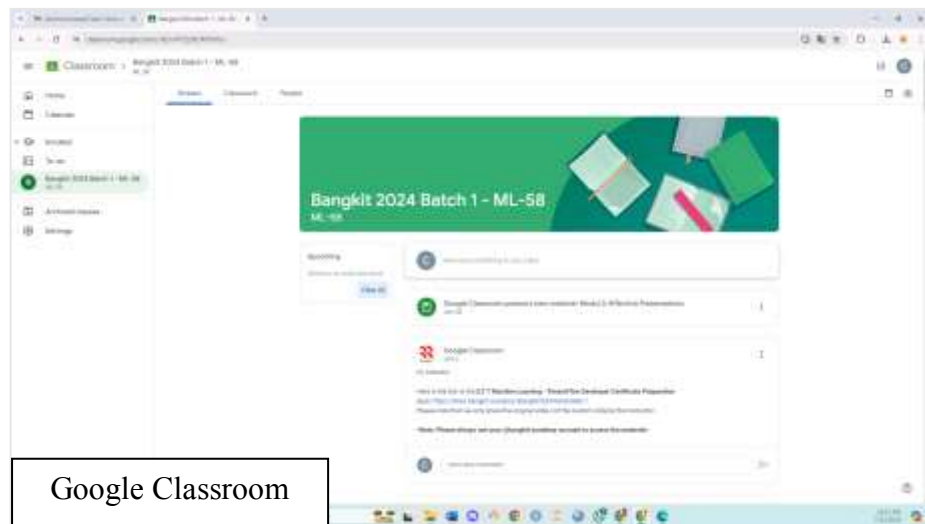
We have selected you and all other participants fully confident in your ability to successfully study tech skills, soft skills, and English for professionals during their ±900 study hours in Bangkit (February - July 2024). If you pass the Bangkit graduation criteria, you will earn up to 20 credits (SKS) and many other benefits unique to this program.

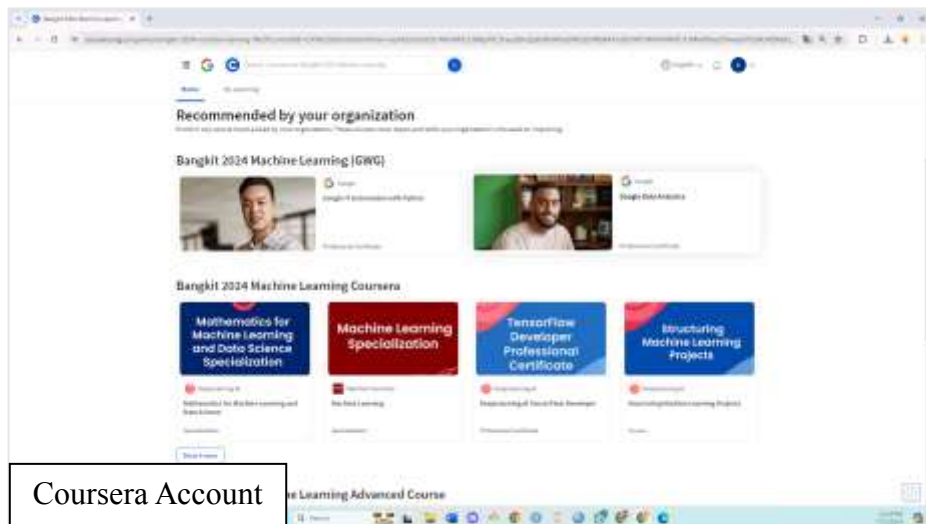
Congratulations! We look forward to your study progress and wish you all the best in your new study milestone in Bangkit.

6 February 2024  
ID Program Manager  
Bangkit Academy

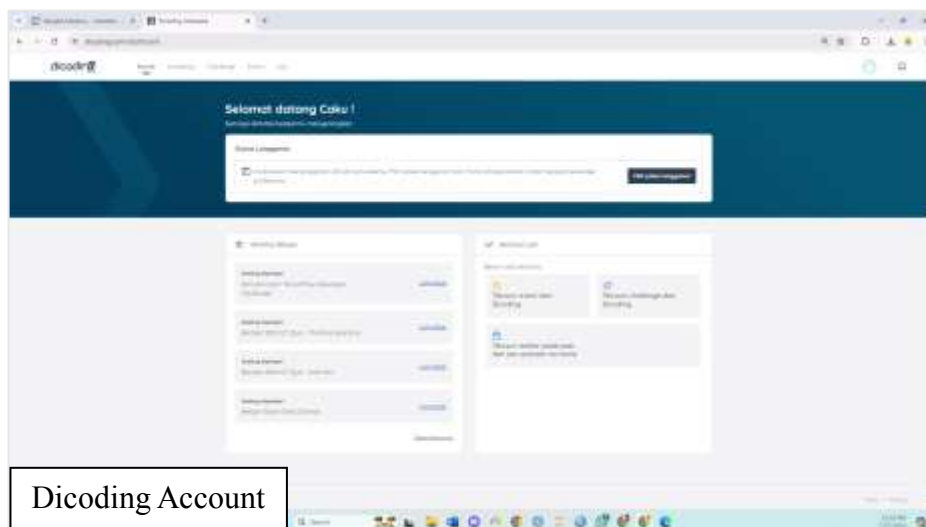
  
Mutiara Arumsari

## Appendix 2. Learning Management System





Coursera Account



Dicoding Account



Whatsapp Group

### Appendix 3. Instructor Led Training Tech

# Unleashing Python for Data Collection

Jason  
Software Engineer  
Tokopedia

 bangit



Activate Windows  
Go to Settings to activate Windows.

The screenshot shows a Beamer presentation slide titled "Discussions" in red text. The slide features a large, faint background question mark and an illustration of four people (three men and one woman) in business attire, with one man pointing at a laptop screen. The Beamer interface is visible, including the navigation pane on the left and the status bar at the bottom. The status bar indicates "Slide 10 of 10" and "Beamer 3.14.4".


[illegible]

## Appendix 4. Instructor Led Training Soft Skill

# Critical Thinking and Problem Solving

**Wahyu Damar Jati**  
Learning Designer  
Dioeding Indonesia

**bangkit**




Wahyu Damar Jati

Activate Windows  
Go to Settings to activate Windows.

### Framework of Critical Thinking and Problem Solving

Follow these steps to solve a problem using critical thinking skills.  
First, understand what is the problem (context).



**What**  
Understand the problem.


**Why**  
Define the root cause.

**How**  
Find potential solutions.

**Do**  
Implement the solution.

**Start** **Finish**

**bangkit**



Wahyu Damar Jati

Activate Windows  
Go to Settings to activate Windows.

### Class Exercise: Problem Definition

**Scenario:**

An e-commerce company, ABC, want to double its revenue this year. To achieve that, they launched a "flash sale" feature earlier this year to penetrate a new market segment. It worked well in the first three months when the feature captured the targeted market. They enjoyed the double revenue growth.


Unfortunately, in the 4th month, their competitor, XYZ, launched a similar flash sale feature in a gamified format. ABC surveyed its users, and the respondents felt the flash sale was great and exciting. Still, they frequently compared it to its competitors because of the gamification feature. In the 4th and 5th months, sales dropped by 5% per month compared to the first three months.

**Instruction:**

Define the problem statement with the Problem Definition Workflow.

Write it down on your personal notebook. **Duration: 10 minutes.**

**bangkit**



Wahyu Damar Jati

Activate Windows  
Go to Settings to activate Windows.

## Appendix 5. Instructor Led Training English

# Spoken Correspondence: Phone and Video Conferencing


The British Institute (TBI)




Activate Windows  
Go to Settings to activate Windows.


01. Put on a smile before making or answering a phone call. When a person smiles it **affects** the sound of his or her voice, giving it a more pleasant and friendly tone.
02. You shouldn't let people wait too long. Pick up the phone and say who you are. Start with saying your name and the company name as well as **"How can I help you?"**
03. When a caller is speaking, listen to what he or she has to say without **interruptions**. Nobody likes that and it's unprofessional.
04. When ending a phone call, do not **hang up** the phone without a positive finish such as "Thank you for calling" or "Have a good day".

**In a business call,  
remember the following**






Activate Windows  
Go to Settings to activate Windows.



## Discuss These Questions

1


Why is it important to follow telephone etiquette for business calls?




Activate Windows  
Go to Settings to activate Windows.



## Appendix 6. Logbook Kampus Merdeka

 **Disetujui**

**Laporan Bulan ke-1**  
 16 Feb - 15 Mar 2024

 Jika ingin melakukan perbaikan laporan, silakan hubungi mentor kamu.


Lihat poin yang harus dituliskan [di sini](#).

Mentoring activities and coordination with both the mentor and DPP went smoothly. The classes were conducted regularly and effectively, adhering to the schedule. Coordination with the DPP was also excellent, as they and the mentor provided helpful guidance and prompt responses. This continuous support made me feel appreciated and motivated throughout the program.


Throughout the program, I acquired valuable skills in data analysis, coding, visualization, and soft skills. Engaging in assignments, particularly from the ILT class, and working on various projects allowed me to apply and reinforce my learning effectively. Notably, my progress has been commendable, as I consistently stayed ahead of schedule with my dashboard tasks, demonstrating my commitment to the program's activities.

Despite the overall positive experience, I encountered personal challenges, particularly with mood control and procrastination. However, I managed to overcome these obstacles by reminding myself of the reasons for participating in the program and seeking support from colleagues who provided encouragement and assistance.

Regarding competency development, I received comprehensive training in soft skills and had access to effective learning systems. The soft skills training encompassed areas such as cultivating a growth mindset and effective time management. Additionally, the learning materials provided were of high quality, facilitating my understanding and enhancing the learning experience.

 **Disetujui**

**Laporan Bulan ke-2**  
 16 Mar - 15 Apr 2024

 Jika ingin melakukan perbaikan laporan, silakan hubungi mentor kamu.

Lihat poin yang harus dituliskan [di sini](#).

Mentoring and coordination activities with companions and DPP ran smoothly. Classes are held regularly and effectively, according to a predetermined schedule. Coordination with the DPP was also very good, because the DPP and companion provided useful directions and responded quickly. This continuous support makes me feel appreciated and motivated to take part in this program.

In this second month, I gained valuable skills about mathematical machine learning, machine learning specialization, English ILT, soft skills related to critical thinking, and just started learning TensorFlow and machine learning project structure. I am involved in assignments, especially from ILT classes, asking questions and working on various projects allows me to achieve proud and commendable progress, as I am consistently ahead of schedule with assignments completed according to my dashboard schedule, showing my commitment towards program activities.

Despite the overall positive experience, I faced personal challenges, especially in terms of mood management and procrastination. However, I managed to overcome this obstacle in the second month by remembering the reasons for joining the program, soft skills training, and seeking support from friends who provided encouragement and assistance if there were obstacles in the task.

Regarding competency development, I received comprehensive training in soft skills, technical ILT, and had access to the program support system.

Disetujui

### Laporan Bulan ke-3

16 Apr - 15 Mei 2024

1 Jika ingin melakukan perbaikan laporan, silakan hubungi mentor kamu.

Lihat poin yang harus dituliskan [di sini](#).

Mentoring and coordination activities with my Mentor and DPP went smoothly. Classes were conducted regularly and effectively, according to the predetermined schedule. Coordination with the DPP was also very good, as the DPL and mentor provided assistance, useful directions and responded quickly to any queries. This continuous support made me feel appreciated and motivated to follow the programme with ease.

In this third month, I have gained a lot of valuable knowledge about Tensorflow, data and machine learning model deployment, English/ILT, soft skills/ILT related to professional branding, and currently still learning about advanced Tensorflow. In addition, I am involved in tasks and activities, especially ILT, asking questions and working on various projects that I may not understand. I am very grateful for achieving proud and commendable progress, as I am consistently ahead of schedule with tasks completed according to my dashboard schedule, which demonstrates my commitment to the programme activities.

Despite the overall positive experience, I faced personal challenges, especially in terms of mood management, procrastination, and shyness to speak up. However, I managed to overcome these obstacles in the second month by keeping in mind the reasons for joining the programme, the soft skills training, and in

Disetujui

### Laporan Bulan ke-4

16 Mei - 15 Jun 2024

1 Jika ingin melakukan perbaikan laporan, silakan hubungi mentor kamu.

Lihat poin yang harus dituliskan [di sini](#).

Mentoring and coordination activities with the Mentor and DPP ran smoothly. Classes with Mentors are held regularly and effectively according to a predetermined schedule. Coordination with the DPP is also very good, because the DPP and Mentor provide direction and respond quickly and provide continuous support. This makes me feel appreciated and motivated to take part in this program.

In this fourth month, I gained valuable knowledge about advanced deep learning, working on tensorflow simulations, how to do good business presentations, capstones, how to communicate effectively, professionally and branding, how to prepare for tensorflow exams, and insights gained from advisors. I was involved in doing ILT assignments and was active in class and working on the final project which made me happy because the progress we achieved was very significant and fast.

Despite the overall positive experience, I faced personal challenges, especially in terms of mood management and procrastination. However, I managed to overcome this obstacle in the second month by remembering the reasons for joining the program, soft skills training, and seeking support from friends who provided encouragement and assistance if there were obstacles in the task.

Regarding competency development, I received comprehensive training in the fields of soft skills, ILT techniques, and had access to the program support system.



✓ Disetujui

## Laporan Bulan ke-5

16 - 30 Jun 2024

! Jika ingin melakukan perbaikan laporan, silakan hubungi mentor kamu.

Lihat poin yang harus dituliskan [di sini](#).

Mentoring and coordination activities with the Mentor and DPP have been running smoothly. Classes with Mentors are held regularly and effectively according to a predetermined schedule. Coordination with the DPP has also been excellent, as both the DPP and Mentor provide timely direction, respond quickly, and offer continuous support. This makes me feel appreciated and motivated to participate in this program.


In this fifth month, I have successfully completed my final project and made a capstone presentation in front of other groups. Additionally, I have provided 360-degree feedback to my own team, which has been a valuable learning experience.

Despite the overall positive experience, I faced personal challenges, particularly in managing my mood and dealing with procrastination. However, I managed to overcome these obstacles by the second month by reminding myself of the reasons for joining the program, participating in soft skills training, and seeking support from friends who offered encouragement and assistance with any task-related difficulties.


Regarding competency development, I have received comprehensive training in various areas, including soft skills, ILT techniques, and access to the program support system. The training has equipped me with essential skills and knowledge, contributing significantly to my professional and personal growth. The program's support system has been instrumental in ensuring that I stay on track and achieve my goals.


Overall, the mentoring, coordination, and training provided by the Mentor, DPP, and the program have been

## Appendix 7. Dashboard Bangkit


[Bangkit Dashboard](#)

[Announcement](#)
[Student Portal](#)
[Capstone Project](#)
[Newsletter](#)
[Resources](#)

[My Profile](#)




**Caku**  
m737d4ky2637

- ITKP Persada Khatulistiwa
- Sekarang
- Pendidikan Baru Inggris
- 33ans, M.Fd
- Buku Man Haters
- Progress Status

[Ahead of Schedule](#)

**PROGRESS**

Please note that this dashboard doesn't update in real-time.

**Attendances (Last update: 15-07-2024)**

Missing	Lepas Sambut Bangkit 2024
Missing	Bangkit 2024 Empower Your Tomorrow: Unlocking Your Infinite Potential
Missing	Bangkit 2024 Technical Briefing
Missing	Bangkit 2024 Batch 1 - Student Team Meeting 1
Missing	Bangkit 2024 Batch 1 - Student Team Meeting 2
Missing	Bangkit 2024 Batch 1 - Student Team Meeting 3

[Show all](#)

**Course Progress (Last update: 30-06-2024)**

Crash course on Python	100%
Using Python to Interact with OS	100%
Intro to Git and GitHub	100%
Belajar Analisis Data dengan Python	100%
Process Data from Dirty to Clean	100%
Analyze Data to Answer Questions	100%

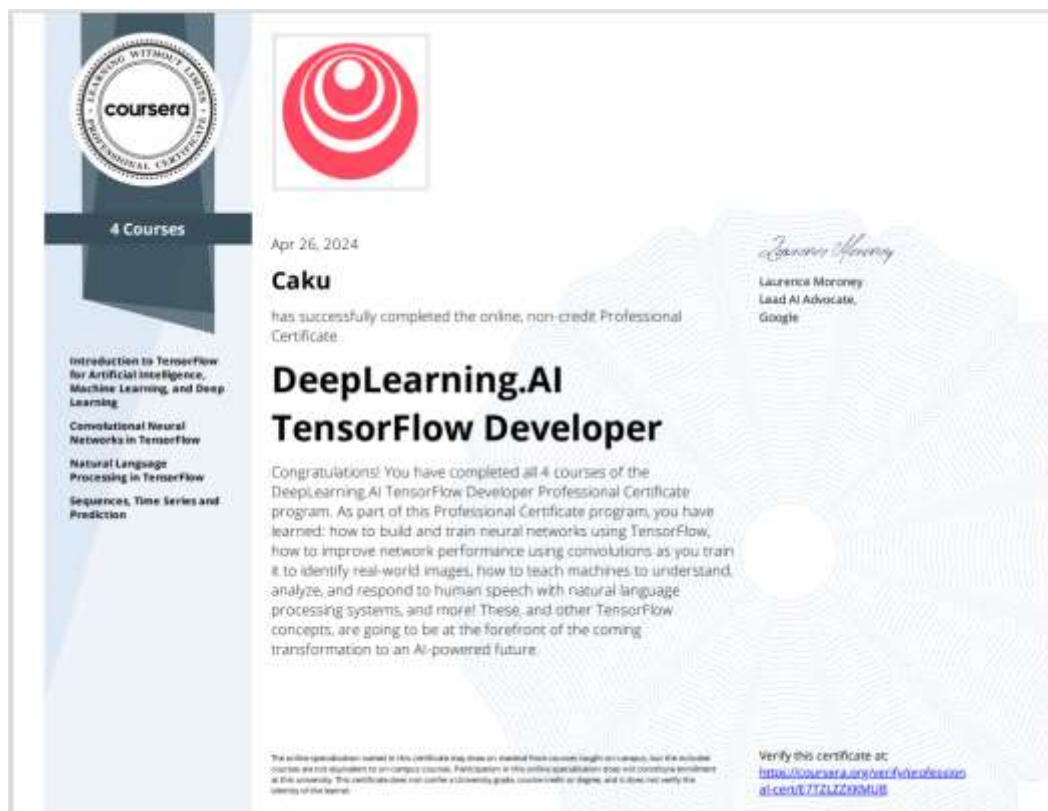
[Show all](#)

**Assignments (Last update: 30-06-2024)**

Completed	Soft Skill Assignment 1 - Growth Mindset and The Power of Feedback
Completed	Soft Skill Assignment 2 - Time and Energy Management
Late	Soft Skill Assignment 3 - Stress Management, Adaptability, and Resilience
Late	Soft Skill Assignment 4 - Critical Thinking and Problem Solving
Completed	Soft Skill Assignment 5 - Project Management
Completed	Soft Skill Assignment 6 - Professional Branding and Networking

[Show all](#)

## Appendix 8. Certificates of Course Completion







4 Courses

Browser-based Models with TensorFlow.js  
Device-based Models with TensorFlow Lite  
Data Pipelines with TensorFlow Data Services  
Advanced Deployment Scenarios with TensorFlow

May 12, 2024

**Caku**  
has successfully completed the online, non-credit Specialization


**TensorFlow: Data and Deployment**

In this specialization, you continued to develop your understanding of machine learning with TensorFlow: Data and Deployment. You have gone beyond basic modeling and learned how to train and run your models within a browser, optimize machine learning models for mobile devices, and create effective data pipelines with TensorFlow Data Services. Now that you've learned the various ways to deploy your models, you're well-prepared to take your models into the hands of real people on all kinds of devices!

*Laurence Moroney*  
Laurence Moroney  
Lead AI Advocate at  
Google

This online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer university grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:  
<https://coursera.org/verify/specialization/UNDP16PT2N8J>



4 Courses

Custom Models, Layers, and Loss Functions with TensorFlow  
Custom and Distributed Training with TensorFlow  
Advanced Computer Vision with TensorFlow  
Generative Deep Learning with TensorFlow

May 26, 2024

**Caku**  
has successfully completed the online, non-credit Specialization

**TensorFlow: Advanced Techniques**

Congratulations! You have completed all four courses of the TensorFlow: Advanced Techniques Specialization! With this Specialization, you've expanded your knowledge of the Functional API and are ready to build exotic non-sequential model types. You learned how to optimize training in different environments with multiple processors and chip types and have also been introduced to advanced computer vision scenarios such as object detection, image segmentation, and interpreting convolutions. You've explored generative deep learning including the ways AIs can create new content from Style Transfer to Auto Encoding, VAEs, and GANs. You are now equipped to build complex, custom models using TensorFlow.

*Laurence Moroney*  
Laurence Moroney  
Lead AI Advocate  
Google

This online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer university grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:  
<https://coursera.org/verify/specialization/UNDP16PT2N8J>

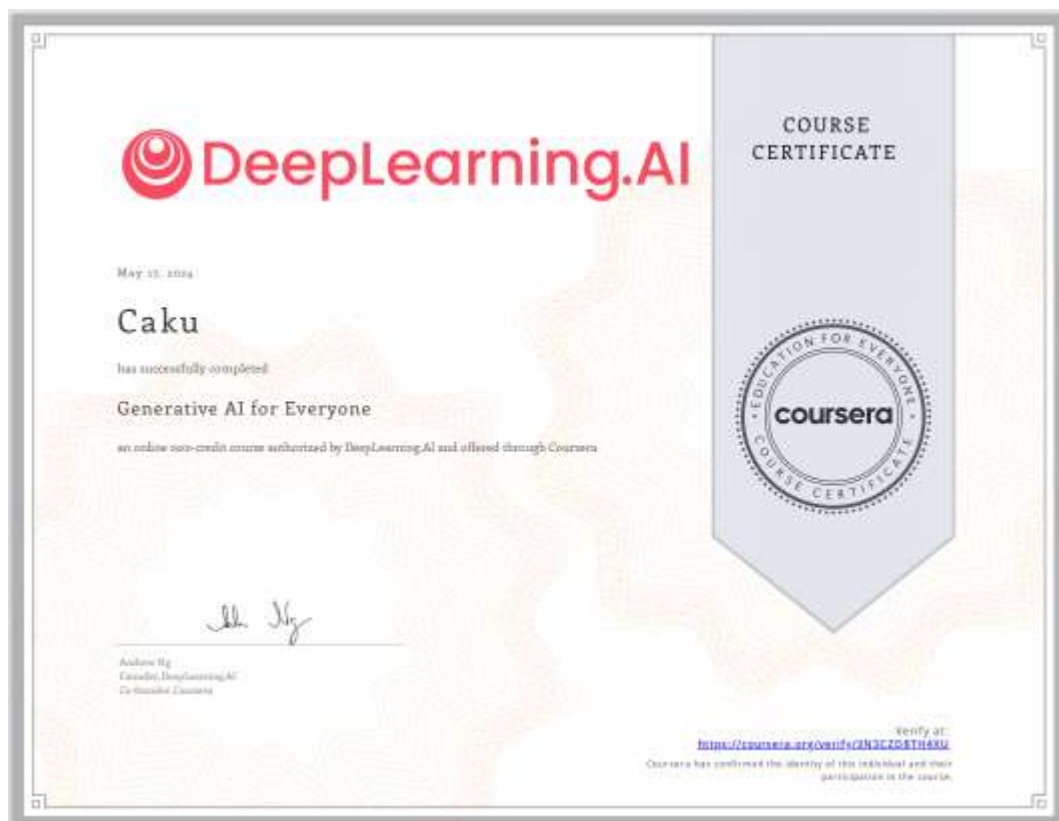
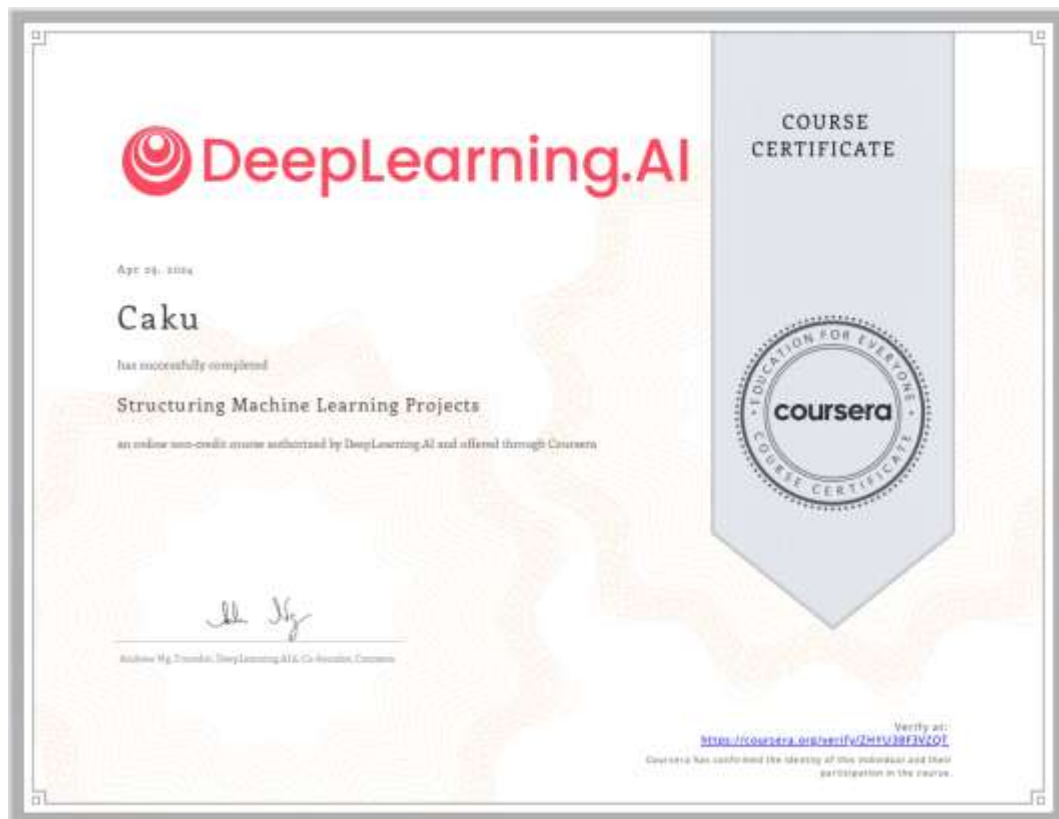












## Appendix 9. Project Plan



Google goto tokopedia traveloka



## Project Plan

### Product-based Capstone Project

**Team ID** : C241-PS120

**Team Member** :

1.	(ML)	M737D4KY2637	Caku	STKIP Persada Khatulistiwa	Active
2.	(ML)	M189D4KY2307	Ilham Dio Putra	Universitas Bengkulu	Active
3.	(ML)	M327D4KY3210	Muhammad Izza Iqbal	Universitas Teknologi Yogyakarta	Active
4.	(CC)	C189D4KY0335	Arief Satrio Budi Prasjo	Universitas Bengkulu	Active
5.	(CC)	C010D4KY0960	Septio Nugroho	Universitas Indonesia	Active
6.	(MD)	A189D4KY4129	Fajar Adhitia Suwandhi	Universitas Bengkulu	Active
7.	(MD)	A121D4KY3590	Muhammad Irgy Syah Daffa	Universitas Telkom Surabaya	Active



## Project Plan

### Product-based Capstone Project

#### Final Selected Themes:

Smart Agri-Fishery Solution: Agrotech and Fisheries Technology Integration -

#### Title of the Project:

Coptas

#### Executive Summary/Abstract:

Indonesia is one of the world's largest coffee producers, yet coffee productivity in the country remains relatively low compared to other nations. This is partly due to diseases affecting coffee plants. Coptas is envisioned as an application to detect leaf diseases in coffee plants. This application is expected to assist coffee farmers in identifying leaf diseases, understanding treatment and prevention methods, and providing additional information about coffee plants.

#### Research Questions:

- How can we develop a mobile application that effectively detects leaf diseases in coffee plants in Indonesia?
- What features should the app include for disease detection, prevention, and comprehensive coffee plant information?
- How can we ensure that the app is user-friendly and accessible to coffee farmers, even those with limited technology access and knowledge?

We will develop a mobile app to aid coffee farmers in Indonesia. It will offer them comprehensive tools and information to identify and manage leaf diseases in coffee plants effectively. By empowering coffee farmers with these resources, we aim to enhance productivity, increase income, and foster sustainable growth in Indonesia's coffee industry.

#### How did your team come up with this project?

Our team initiated this project after recognizing the substantial challenges confronting coffee farmers in Indonesia. They struggle with issues like diseases harming their crops, leading to low productivity. To address these problems, we came up with the idea of creating a simple phone app. This app would focus on identifying diseases in coffee plants. It will provide farmers with the information and tools they need to recognize, treat, and prevent these diseases. Our main goal is to increase productivity, income, and sustainability in Indonesia's coffee industry.

## Project Plan

### Product-based Capstone Project

#### Project Scope & Deliverables:

Week	Path	Task	Deliverables
Week 1	Android	Create user flow and design system	Application user flow and design identity for application
		Wireframing	UI/UX design for application
	Machine Learning	Gather some Coffle Leaf Disease images dataset	Dataset
		Preprocessing Dataset	Dataset
	Cloud Computing	Create Cloud Architecture Design and Preparation	Cloud infrastructure
Week 2	Android	Slicing UI	Implementing UI/UX in Android Studio
		Prototyping	Prototype, UI components
	Machine Learning	Build the ML model and train the dataset to the ML model	Trained model, Evaluation report
	Cloud Computing	Create Database Schema Design and Preparation	Database schema
		Creating a development Back-end Server	Consumable API
		Creating Admin Authentication	Login API



## Project Plan

### Product-based Capstone Project

Week 3	Android	Develop User View	Create User View
		Implementing API	Implementing API in Android
	Machine Learning	Evaluating Model	Monitoring report and evaluation plan
	Cloud Computing	Develop Web Admin	Stable Web for Admin
		Creating dummy disease detection on coffee leaf	Model API with dummy data in return
Week 4	Android	Integrating disease detection with the server	Stable, well-tested app, bug reports, and fixes
	Machine Learning	Deploy Model	Deployed model
		Upgrade machine learning model performance	Deployed machine learning model
	Cloud Computing	Testing the Rest-API	Stable and well-tested API
Week 5	Android	Animate UI	Animating UI for user
		Testing Application	Testing and debugging application
		Build	Deployed Android Application
	Machine Learning Cloud Computing	Create documentation and preparing for product presentation	Documentation



## Project Plan

### Product-based Capstone Project

	Cloud Computing	Deploy production server	A complete functional Server for Mobile

#### Project Schedule:



Based on your team's knowledge, what tools/IDE/Library and resources that your team will use to solve the problem?

#### Mobile Development:

- Android Studio (Official IDE for Android development)
- Figma (UI Design Software)
- Github (Store and Collaborating Software)
- Retrofit (HTTP communication library)
- RoboPOJOGenerator (Generate Plugin from POJO to GSON)
- Room (Local Database Library)
- TensorFlow Lite (Provide API for Deploying Model)
- Glide(Image Load Library)

#### Cloud Computing:

- Cloud storage (Object Storage for storing images)
- Cloud run (serverless to run docker container apps)



## Project Plan

### Product-based Capstone Project

- Docker (for containerizing back-end services)
- Cloud IAM (for managing cloud users)
- Cloud SQL (database)
- Visual Studio Code (Text editor for code the app)
- Go (Programming language to create back-end service)
- GoFiber (Framework to create REST API)
- Python (Programming language to create API from ML model)
- Flask (to create API from the created model)
- Postman (testing the API)
- JSON Web Token (Authentication tokens for users security)

#### Machine Learning:

- **IDE & Text Editor:**
  1. Visual Studio Code
  2. Google Colaboratory
- **Library:**
  1. Tensorflow (Open-Source machine learning framework for defining, training, and evaluating various types of models, including neural networks and decision trees)
  2. Tensorflow Lite
  3. Keras (High-level interface for building and training neural networks models)
  4. Numpy (Fundamental library that is used for efficient array manipulation and math operations)
  5. Pandas (for data manipulation and analysis)
  6. Matplotlib (for data visualization)
- **Resource:**
  1. Kaggle (platform to get coffee leaf dataset)

#### Based on your knowledge and explorations, what will your team need support for?

- Mentoring for Business and Management side
- Mentoring for creating REST API and choosing the right infrastructure on the Google Cloud Platform
- UI/UX References



## Project Plan

### Product-based Capstone Project

**Based on your knowledge and explorations, tell us the Machine Learning Part of your Capstone!**

The machine learning component of our app will focus on coffee leaf disease classification using deep learning techniques, specifically CNN. To enhance our accuracy, we may also employ transfer learning from existing models such as Inception V4 or MobileNetV2. For model deployment, we plan to use TensorFlow Lite.

**Based on your knowledge and explorations, tell us the Mobile Development Part of your capstone?**

UI/UX design will be developed in Figma, while the Android application will be built using Kotlin in Android Studio. The application will use the MVVM architectural pattern and will be integrated with the API.

**Based on your knowledge and explorations, tell us the Cloud/Web/Frontend/Backend Part of your capstone?**

We are planning to implement an API server using Golang, Flask for the model server, MySQL for the database and GCP to deploy apps. We also use Cloud Storage to save images to be displayed on the mobile and use Google Auth for user authentication to access API.

**Based on your team's planning, is there any identifiable potential Risk or Issue related to your project?**

Machine learning models must be tested and validated to avoid biases that can negatively impact farmers. The application's accuracy and reliability are essential as farmers rely heavily on accurate information to make decisions. Poor network connectivity can affect the functionality of the application, and the user experience must be user-friendly and easy to navigate. As the user base grows, scalability is necessary.

**Any other notes/remarks we should consider on your team's application**

-

## Appendix 10. Advisors



Dear C241-PS120 Team,

We are excited to announce the assignment of advisors for your **capstone** projects. These advisors will play a crucial role in guiding and supporting your team throughout this **capstone** journey. Here are the details of your assigned advisors:

Advisor ID	Name of Advisor	Expertise	Email Address
CC24-0253	Warham	Cloud Computing	<a href="mailto:warhamhayat@gmail.com">warhamhayat@gmail.com</a>
B24-0453	Constantine Dylan	Business/Commerce/Ideation	<a href="mailto:dylansugito@gmail.com">dylansugito@gmail.com</a>

### Important Instructions:

- Contact your Advisor 🗨️**  
 Please contact your assigned advisor immediately via email to initiate the mentoring process (*Introduce your team first and ask the advisor's time availability politely*).  
**If you do not receive a response from your advisor within 2 days (working hours),** please report the situation by filling out the [Inactive Advisor Report Form](#). 📌
- Complete your mentoring logbook**  
 Before conducting the mentoring sessions with your Advisor, please ensure you have filled out the mentoring logbook. You can find the mentoring logbook through your team's master sheet or by clicking the following link: [Mentoring Logbook](#)
- Fill in the Mentoring Feedback Form 👍**  
 After completing the mentoring sessions, the **capstone** team must fill out the [Mentoring Feedback Form](#) to provide constructive feedback on your mentoring experience.

We wish you a successful **Capstone** experience and productive collaboration with your assigned advisors. Please feel free to contact us if you have any questions.

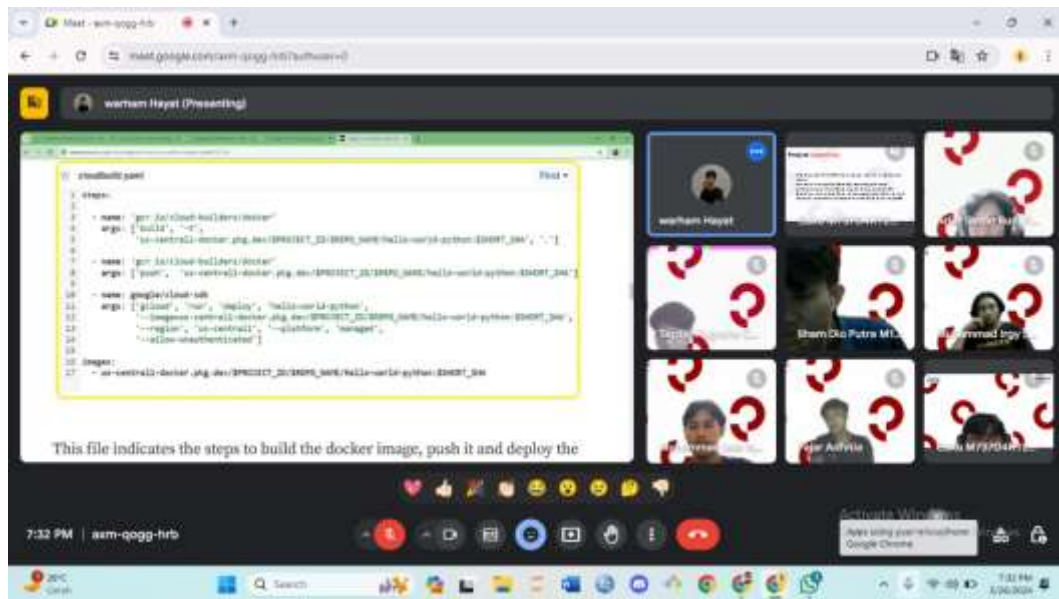
Thank you and Good Luck! ✨

Best Regards,

*Bangkit Team*



## Appendix 11. Meeting with Cloud Computing Advisor





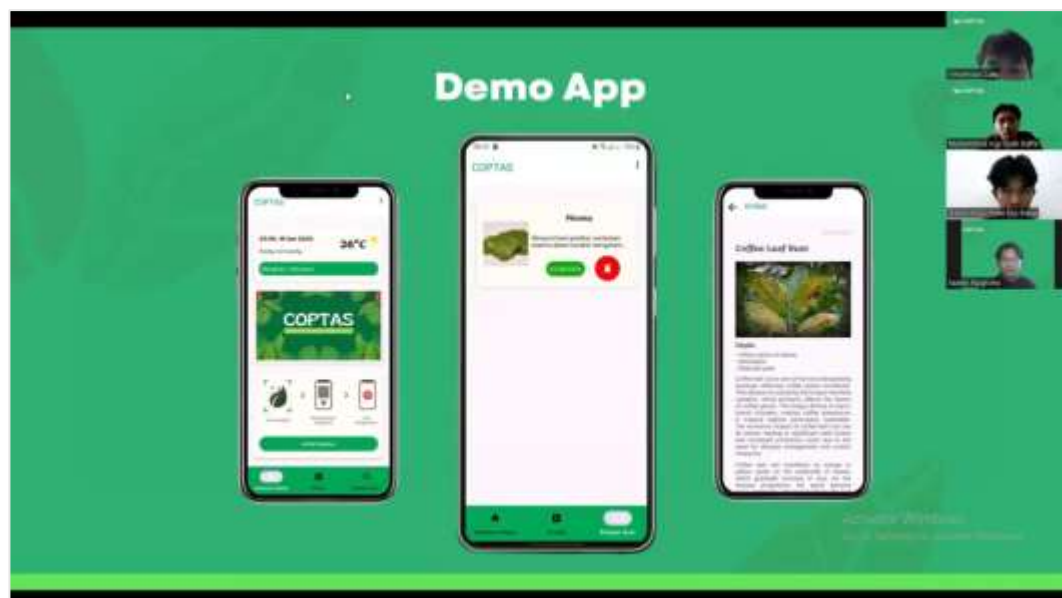
## Appendix 12. Meeting with Business Advisor



## Appendix 13. Meeting with Team



## Appendix 14. Presentation and Peer Review Session



## Appendix 15. Team's Final Capstone Project Grades



Dear **C241-PS120**,

Hope this email finds you well ✨

It has been an exciting journey to witness your dedication, teamwork, and perseverance throughout the project. **This email serves as a notification of your Team's Final Capstone Project Grades.**

Your completion capstone project status: **Finished**

Please find the detailed breakdown of your project's score below:

Aspect	Project Plan Document	Peer Review Presentation	Project Brief Document	Final Project Score
Your team's score	88	88	84	<b>86.21</b>

And also find your individual team member status below:

Student ID	Name	Status*
M189D4KY2307	Ilham Dio Putra	<b>Active</b>
M327D4KY3210	Muhammad Izza Iqbal	<b>Active</b>
M737D4KY2637	Caku	<b>Active</b>
C189D4KY0335	Arief Satrio Budi Prasajo	<b>Active</b>
C010D4KY0960	Septio Nugroho	<b>Active</b>
A189D4KY4129	Fajar Adhitia Suwandhi	<b>Active</b>
A121D4KY3590	Muhammad Irgy Syah Daffa	<b>Active</b>

*\*Status of each team member was determined based on their contributions reported by the project plan, project brief, and inactive member report form.*

## Appendix 16. Graduation Letter



Jakarta, July 10th, 2024

**To whom it may concern**

This letter is to certify that the following student has successfully participated in Bangkit 2024 Batch 1, and therefore **Graduated** from Bangkit 2024, a Google-led program in collaboration with GoTo, Tokopedia, and Traveloka in **Machine Learning** learning path:

Name	: Caku
Student ID (Origin University)	: 200407124
University	: STKIP Persada Khatulistiwa
Study Program	: Pendidikan Bahasa Inggris
Supervisor	: Sijono, M.Pd
Bangkit ID	: M737D4KY2637
Program Period	: 16 February 2024 - 30 June 2024

Bangkit is an approved Kampus Merdeka - Study Independent program fully supported by the Ministry of Education, Culture, Research, and Technology - Republic of Indonesia. This industry-led, interdisciplinary, and immersive program is designed to produce high-caliber technical talents for world-class Indonesian technology companies and startups.

In this even semester 4,650 students from 327 universities across Indonesia were selected from more than 57,000 registrants to join Bangkit. They learned to improve their technical skills, soft skills, and English competencies to help them get better employability in their future careers in the technology industry.

Sincerely,


**Mutiara Arumsari**  
Bangkit ID Program Manager

Appendix 17. English Test Result.







Appendix 18. Certificate of Graduation from Bangkit Academy



## Appendix 19. Transcript of Grades From The Bangkit Academy Program



**Bangkit 2024 Final Transcript**



**Generated : 1 July 2024**

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**Bangkit ID** : M737D4KY2637  
**Name** : Caku  
**University** : STKIP Persada Khatulistiwa  
**NIM** : 200407124  
**Supervisor** : Sijono, M.Pd

**Transcript Status** : Final  
**Bangkit Completion** : Full Graduate  
**Learning Path** : Machine Learning  
**Capstone Team** : C241-PS120  
**Capstone Status** : Finished

Courses/Specialization/Activities	Course Codes	Hours	Suggested SKS	Score (0-100)	Score (A-E)
Google IT Automation with Python	B24MLCR01	55	1	90.6	A
Belajar Analisis Data dengan Python	B24MLDC02	30	2	92.7	A
Google Data Analytics	B24MLCR06	73		92.3	A
Mathematics for Machine Learning and Data Science Specialization	B24MLCR02	58	1	94.6	A
Machine Learning Specialization	B24MLCR07	72	3	97.1	A
DeepLearning.ai TensorFlow Developer Professional Certificate	B24MLCR03	79		96.4	A
Tensorflow Data and Deployment	B24MLCR05	47	1	95.6	A
Structuring Machine Learning Projects	B24MLCR04	6	2	90.8	A
Intro to Generative AI	B24MLCR08	4		97.3	A
TensorFlow: Advanced Techniques Specialization	B24MLCR09	67		97.1	A
Preparing for Tensorflow Developer Certification	B24TDCP01	25		97.3	A
Capstone / Final Project	B24CAPP01	200	5	91.7	A
Soft skill & Career Development	B24SSCE01	242	5	82.1	B
<b>Total (Hours, SKS) / Average (Score)</b>		<b>958</b>	<b>20</b>	<b>90.80</b>	<b>A</b>

Student's Attendance (Mandatory Meeting) 95.83%

Student's Attendance (All Meeting) 92.86%

1. This is Bangkit-system-generated transcript and valid without signature

2. This Transcript acts as a recommendation. Final Decision on conversion is strictly Academic Counselor / Study Programme Prerogative.

**Grade conversion:**

**A** : 85 - 100 | **B** : 75 - 84 | **C** : 60 - 74 | **D** : 50 - 59 | **E** : 0 - 49

Appendix 20. Certificate of Participation in the 6th MSIB



## BIOGRAPHY



Caku, the 8th of 10 children born to Mr. Paulus Aban and Mrs. Margarita Awi, was born on April 20, 2002 in PB. Penai, Silat Hilir District, Putussibau Regency. He has completed his elementary education at SDN 05 PB. Penai from 2010 to 2015. proceeded to SMPN 06 Silat Hilir from 2015 to 2017, and later attended SMA Nusantara Indah Sintang from 2017 to 2020. In 2020, he pursued higher education at STKIP Persada Khatulistiwa Sintang, enrolling in the English Language Education study program. While at STKIP Persada Khatulistiwa Sintang, he actively engaged in a variety of activities such as UKM Seni, KMK, HMPS, Lecturer Project, SIB Data Science Program at Startup Campus, and SIB Machine Learning at Bangkit Academy. In the Student Association of English Language Education (HMPS) membership, he held the position of Social Network and Development for three terms. As part of the Independent Study Program in Data Science, he undertook time series projects and created a machine learning-based application for detecting coffee leaf disease.