

# Portfolio

Ilma Aliya Fiddien

October 2023

Writing

---

Leadership &  
Human Development

---

Programming &  
Technology

# Writing

# Academic Essays

Revolutionising Educational Inclusivity in Indonesia with Conversational AI: Opportunities, Challenges, and Strategies [\[read\]](#)

Lensa's Magic Avatar Raises Concerns Amongst Artists: A Case Study in AI Ethics [\[read\]](#)

Jalan Tengah Antara Rasionalitas dan Spiritualitas [\[read\]](#)

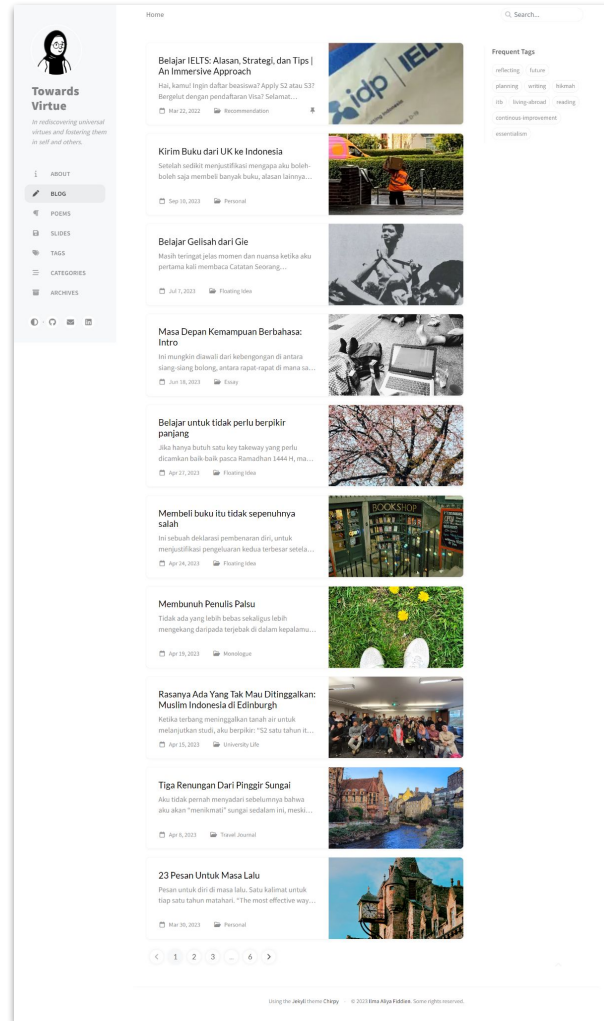
Sains, Bebas-Nilai atau Terikat-Nilai? [\[read\]](#)

# Online Blogging

Writing to reflect from my experiences and to crystallize what I had learned.

[fiddien.com](https://fiddien.com)

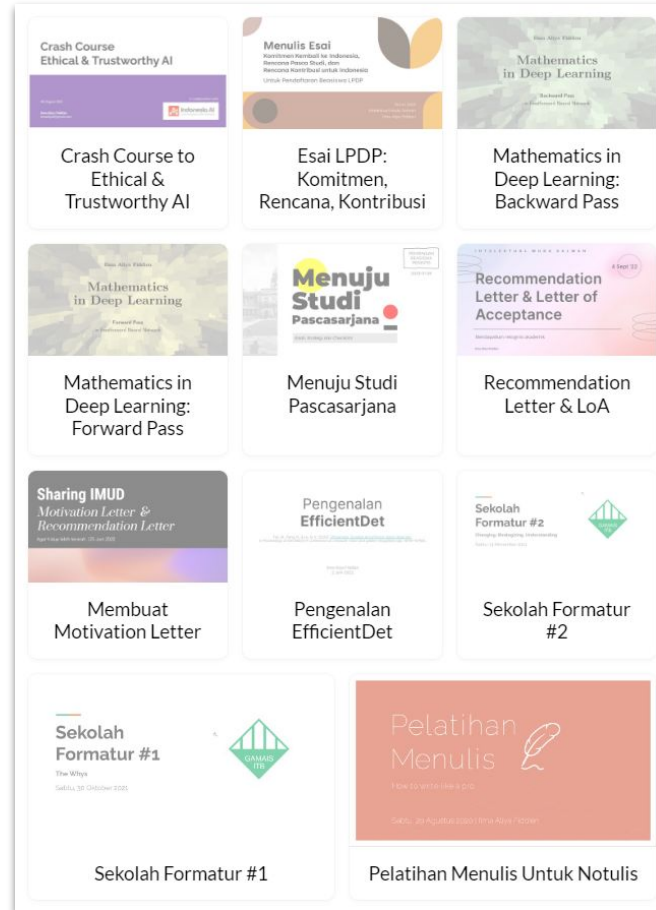
[fiddien.medium.com](https://fiddien.medium.com)



# Slides for Speaking In Public Events

On artificial intelligence,  
machine learning, scholarship,  
studying abroad, organization  
planning, etc.

[fiddien.com/slides](https://fiddien.com/slides)



# **Leadership & Human Development**

# Program Manager of Pembinaan Beasiswa Perintis

Restructured a  
leadership-based curriculum  
for the scholarship awardee  
across their 4-year journey.

Conducted monthly  
development programs.

beasiswa  
perintis

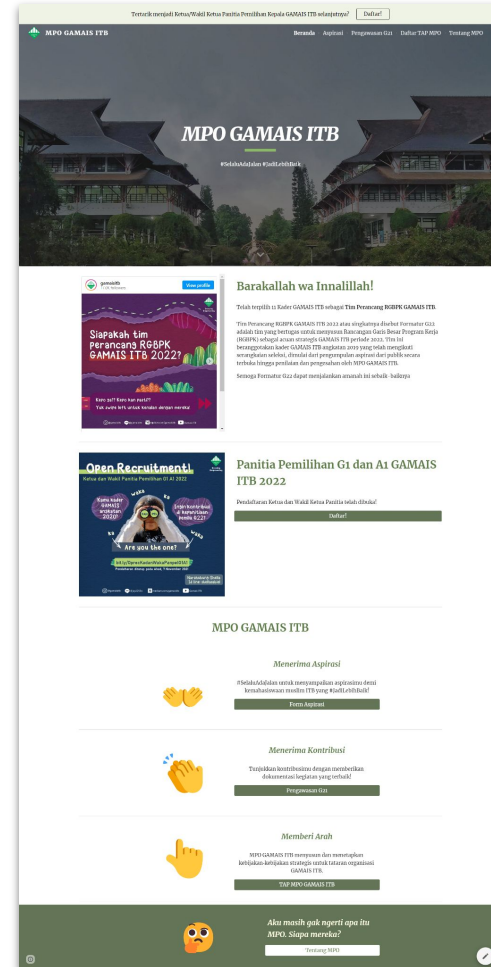
Click the logo  
to see more!



# Majelis Pertimbangan Organisasi GAMAIS ITB

Oversaw all programs related to people-development and regeneration.

Developed a learning curriculum for the regeneration team and closely advise them.





# **Programming & Technology**

# Analyse the Clarity of a Sentence

Combining machine learning with rule-based algorithm to check whether a sentence adheres to a specific clear-writing principles.

A part of my master's thesis.

*Python, NLP, spaCy, Flask  
dependency relations, abstract meaning representation*



### Analyse the Clarity of a Sentence

Write your sentences...

Choose from examples...

Predict

#### Sentence #1

Little Red Riding Hood **was** walking **to** the woods when the wolf suddenly jumps and frighten her.

Little Red Riding Hood **was** walking **to** the woods when the wolf suddenly jumps and frighten her.

Little Red Riding Hood was walking to the woods when the **wolf** suddenly jumps and frighten her.

Little Red Riding Hood was walking to the woods when the **wolf** suddenly jumps and frighten her.

**ADHERENCE TO THE PRINCIPLES OF CLEAR WRITING**

- ✓ CHARACTER IS THE SUBJECT
- ✓ ACTION IS THE VERB
- ✓ AVOIDS LONG ABSTRACT SUBJECT
- ✓ AVOIDS LONG INTRODUCTORY PHRASES AND CLAUSES
- ✓ AVOIDS INTERRUPTING SUBJECT-VERB CONNECTION

#### Sentence #2

A walk **was** taking **a** place in the wood when the wolf's jump frightened Little Red Riding Hood.

A walk was taking a place in the wood when the wolf's **jump** frightened Little Red Riding Hood.

A walk was taking a place in the wood when the **wolf**'s **jump** frightened Little Red Riding Hood.

**ADHERENCE TO THE PRINCIPLES OF CLEAR WRITING**

- ✓ CHARACTER IS THE SUBJECT
- ✓ ACTION IS THE VERB
- ✓ AVOIDS LONG ABSTRACT SUBJECT
- ✓ AVOIDS LONG INTRODUCTORY PHRASES AND CLAUSES
- ✓ AVOIDS INTERRUPTING SUBJECT-VERB CONNECTION

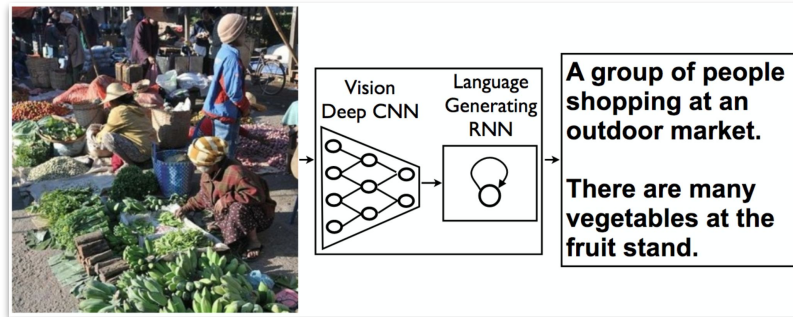
[ source code | @fiddien ]

# Generate Captions for Images

Developed a deep learning model to generate captions for images.

Given an image, a CNN encoder is placed on top of a pre-trained ResNet50 before an RNN decoder produces appropriate texts.

*Python, PyTorch, NLTK*  
*computer vision, natural language*

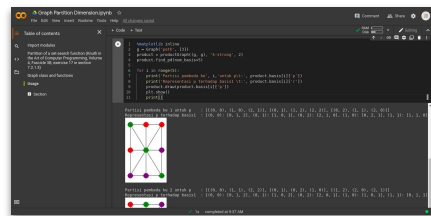
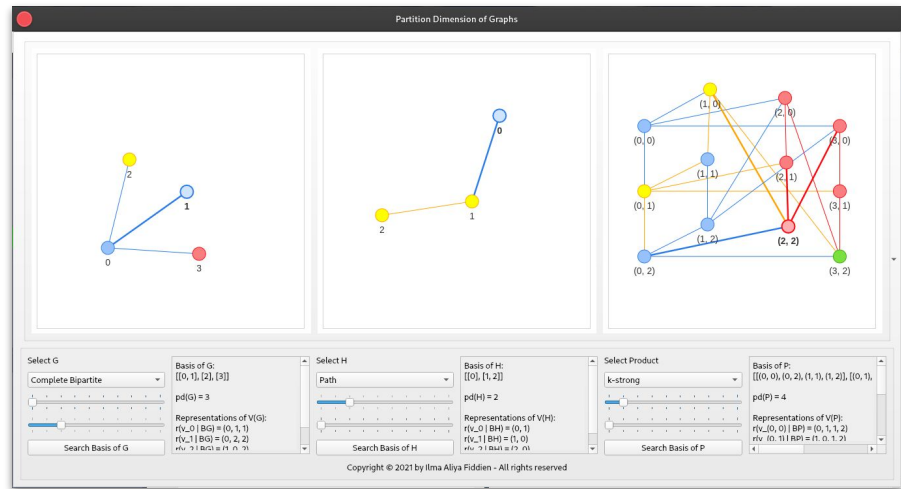


# Graph Partition Dimension Program

Visualize the  $k$ -strong operation between two graphs and find its partition dimension.

A part of my bachelor's thesis.

*Python, NetworkX, PyQt5*  
graph theory



# Indonesian Song Lyrics Corpus

A corpus of 22145 songs lyrics scrapped from Kapanlagi.com.

A personal project.

*Python, BeautifulSoup, multi-threading  
natural language corpus*

22145 unique values	22141 unique values	Iwan Fals Rhoma Irama Other (21542)	1% 1% 97%	[null] Kumohon kau meng... Other (17989)	19% 0% 81%
<a href="https://lirik.kapanlagi.com/artis/raihan/ababli/">https://lirik.kapanlagi.com/artis/raihan/ababli/</a>	Ababli	Raihan		Bagai Gempa Bumi Yang Menggegarkan Tentera Bergajah Abraham Ingin Memusnahkan Kota Mekah Kerana Deng...	
<a href="https://lirik.kapanlagi.com/artis/candy/abadi/">https://lirik.kapanlagi.com/artis/candy/abadi/</a>	Abadi	Candy		Ku sulami hari-hari Di hatiku kini terkunci Tiba kau hampiri Ruang pintu hati Ingin kau temani... di...	
<a href="https://lirik.kapanlagi.com/artis/xpdc/abadikah-tragedi/">https://lirik.kapanlagi.com/artis/xpdc/abadikah-tragedi/</a>	Abadikah Tragedi	XPDC		Tragedi hanyut aku dalam Satu impian Terbakar aku dalam Keraguan Di mana sembunyi Kesucian satu trag...	
<a href="https://lirik.kapanlagi.com/artis/cafeine/abadikan-cinta/">https://lirik.kapanlagi.com/artis/cafeine/abadikan-cinta/</a>	Abadikan Cinta	Caffeine		Lihatlah dunia yang bertabur bintang Menerangi sepanjang hidup kita Seperti cinta yang kita dambakan...	
<a href="https://lirik.kapanlagi.com/artis/supergirlz/abadikan-kisah-ini/">https://lirik.kapanlagi.com/artis/supergirlz/abadikan-kisah-ini/</a>	Abadikan Kisah Ini	Supergirlz			

# Tower of Hanoi Game

Play Tower of Hanoi game through a GUI.

A coursework.

*Python, PyGame  
number theory*

