

Design Framework as Prototype of Islamic Medicine Engine to any Disease Especially for Covid-19 based Al-Qur'an and Hadith Using Meta-Deep AI and Particle Swarm Optimization

Our Teams:

Imam Cholissodin, S.Si., M.Kom.

Arief Andy Soebroto, S.T., M.Kom.

Mohammad Muallif, M.Ag.

dr. Aurick Yudha Nagara, Sp.Em.

Ns. Renny Nova, S.Kep., M.Kep., Sp.Kep.J.

Tamara Gusti Ebtavanny, S.Farm., M.Farm., Apt.

A handwritten signature in blue ink, likely belonging to Imam Cholissodin, the author of the paper.

By: Imam Cholissodin | imamcs@ub.ac.id

Lecturer of Faculty Of Computer Science (a.k.a FILKOM) UB



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Introduction

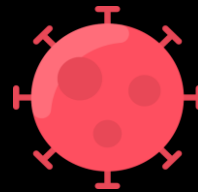


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Integrated Al-Qur'an, Hadith,
Sains and Technology

- Learn any solution from Al-Qur'an and Hadith
- Covid-19 Pandemic Now & Future



Covid-19

- Few Policy of Government (Indonesia):
 - Before: Social/Physical Distancing, PSBB, New Normal
 - Now: New Habit, like Study Form Home (SFH), Stay at Home, Work From Home (WFH), Research From Home (RFH), and others.
- Algorithm to helper as Smart Medical Technology:
 - Meta-Deep AI
 - Particle Swarm Optimization (PSO)

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■ Al-Qur'an



Integrated Al-Qur'an, Hadith,
Sains and Technology

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وَأَوْحَىٰ رَبُّكَ إِلَى النَّحْلِ أَنِ اتَّخِذِي مِنَ الْجِبَالِ بُيُوتًا وَمِنَ الشَّجَرِ وَمِمَّا

يَعْرِشُونَ ﴿٦٨﴾

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ثُمَّ كُلِي مِنْ كُلِّ الثَّمَرَاتِ فَاسْلُكِي سُبُلَ رَبِّكِ ذُلًّا يَخْرُجُ مِنْ بُطُونِهَا شَرَابٌ مُخْتَلِفٌ

أَلْوَانُهُ فِيهِ شِفَاءٌ لِلنَّاسِ إِنَّ فِي ذَٰلِكَ لَآيَةً لِّقَوْمٍ يَتَفَكَّرُونَ ﴿٦٩﴾

ALLAH the All-Knowing says: "And your Lord inspired to the bee, "Take for yourself among the mountains, houses, and among the trees and [in] that which they construct. Then eat from all the fruits and follow the ways of your Lord laid down [for you]." There emerges from their bellies a drink, varying in colors, in which there is healing for people. Indeed in that is a sign for a people who give thought."

[Surah An-Nahl (The Bee), Ayath 68-69]



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■ Hadith

عَنْ أَبِي هُرَيْرَةَ رَضِيَ اللَّهُ عَنْهُ عَنِ النَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ
وَسَلَّمَ قَالَ مَا أَنْزَلَ اللَّهُ دَاءً إِلَّا أَنْزَلَ لَهُ شِفَاءً



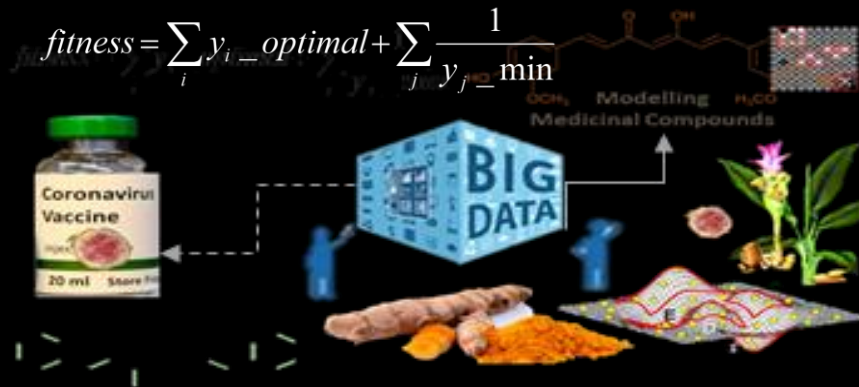
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Literature | Previous Research



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<https://iopscience.iop.org/article/10.1088/1742-6596/1665/1/012003>

- Smart Development of Big Data App for Determining the Modelling of Covid-19 Medicinal Compounds Using Deep AI Core Engine System, ISSMART 2020, Publish on IOP
- Propose as Contribution:

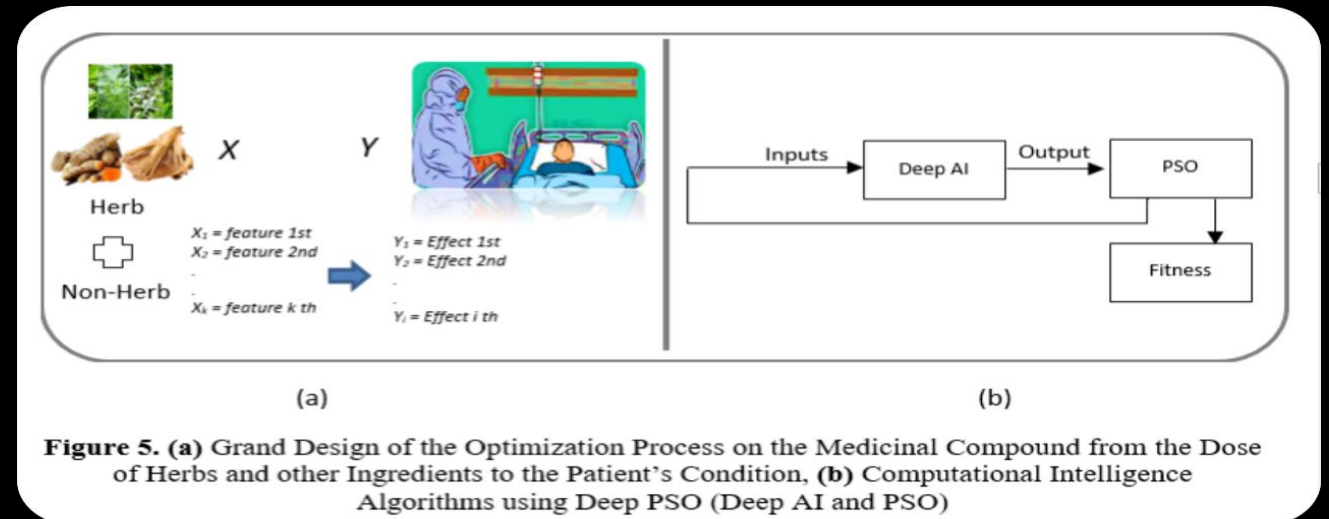


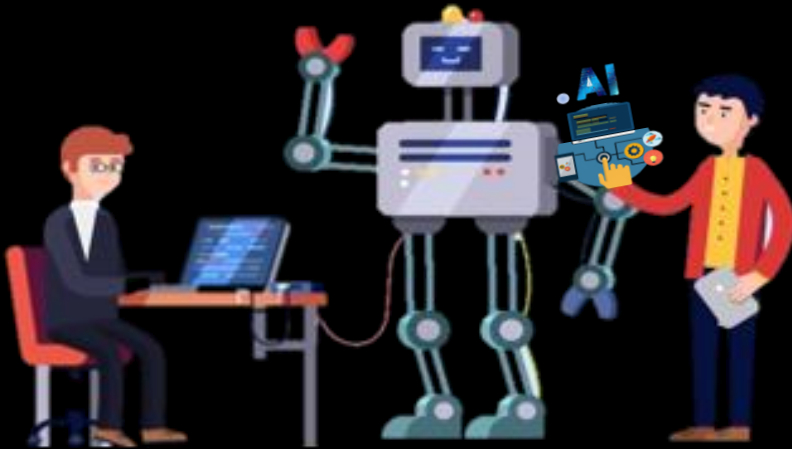
Figure 5. (a) Grand Design of the Optimization Process on the Medicinal Compound from the Dose of Herbs and other Ingredients to the Patient's Condition, **(b)** Computational Intelligence Algorithms using Deep PSO (Deep AI and PSO)

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Literature | Meta-Deep AI & PSO



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- Meta-Deep Ai is all about Ai which has more capabilities and with many special techniques that are made dynamically to solve very complex problems. It's more than Deep Learning.
- PSO is part Science of Swarm Intelligence
 - Adopted from Bird when finding food source as Nature Intelligence



- Initialization Velocity, Position, Pbest & Gbest of Particles
- Update Velocity, Position & Calc. Fitness, Update Pbest & Gbest

$$v_{i,j}^{t+1} = w.v_{i,j}^t + c_1.r_1(Pbest_{i,j}^t - x_{i,j}^t) + c_2.r_2(Gbest_{g,j}^t - x_{i,j}^t)$$

$$x_{i,j}^{t+1} = x_{i,j}^t + v_{i,j}^{t+1}$$

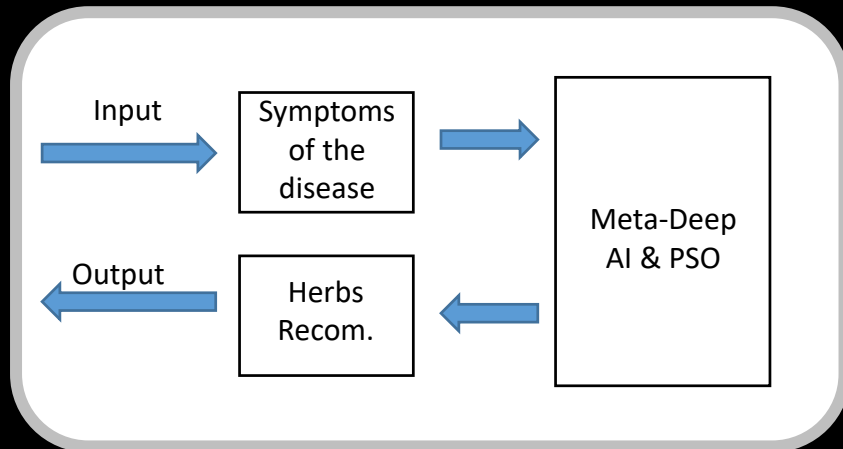
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Prototype Islamic Medical Engine



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Block Diagram of Islamic Medical Engine (IsME)

Load Dataset (Scheme of Tables for Dataset)

Herb	Symptoms or Diseases to be Treatment
Black Cumin,, ...

Running Optimization using PSO

	Herb ₁	Herb ₂	..	Herb _m
x_1	0/1	0/1	0/1	0/1
x_2	0/1	0/1	0/1	0/1
\ddot{x}_{pop_size}	0/1	0/1	0/1	0/1

Objective Function as Fitness

$$fitness = \frac{\#HerbFromQur'an\&Hadith}{\sum_{i=1} Match_i}$$

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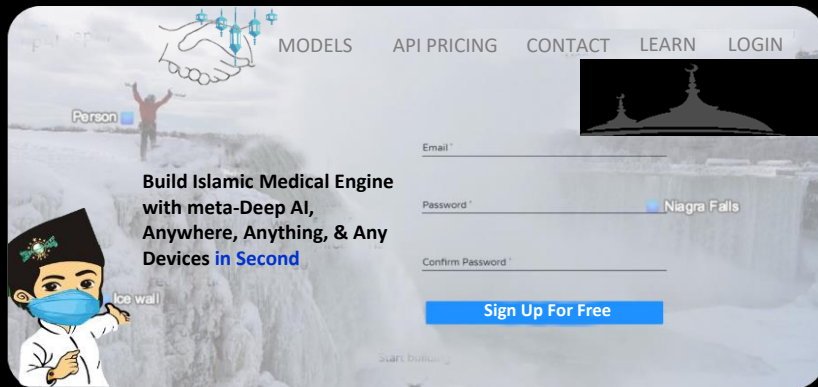
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Result & Discussion

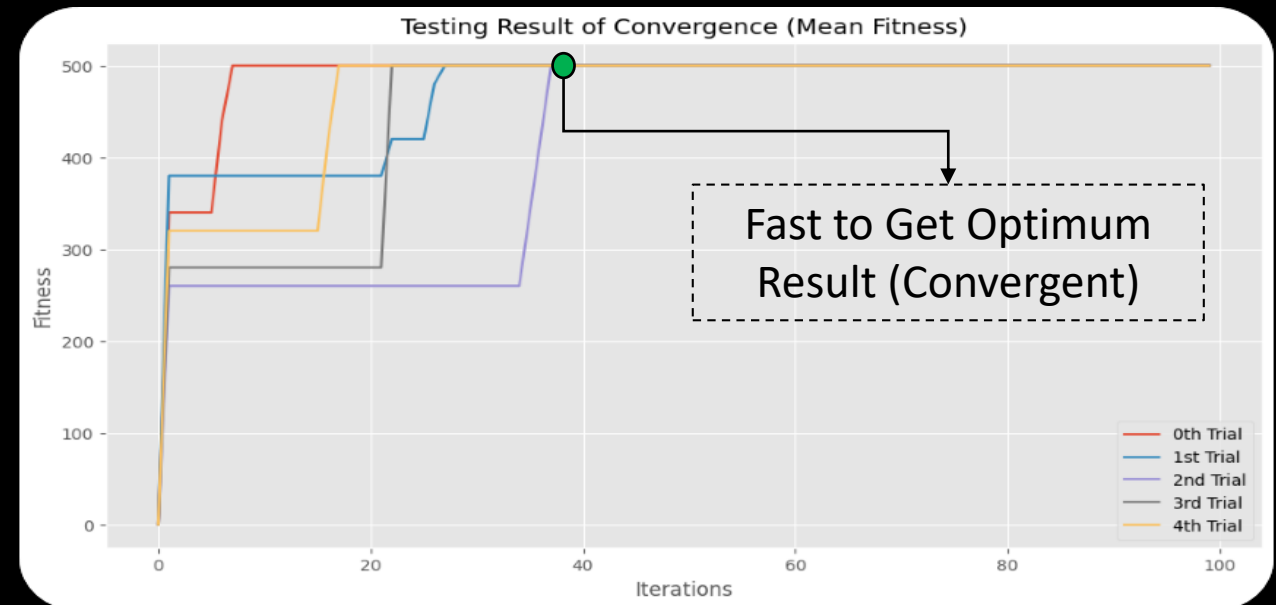


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- Graph of Fitness Value as Simulation Performance Measure has Reached a Convergent (Stable) Condition



Build **Islamic Medical Engine**
with meta-Deep AI, Anywhere, Anything,
Anytime, & Any Devices **in Second**

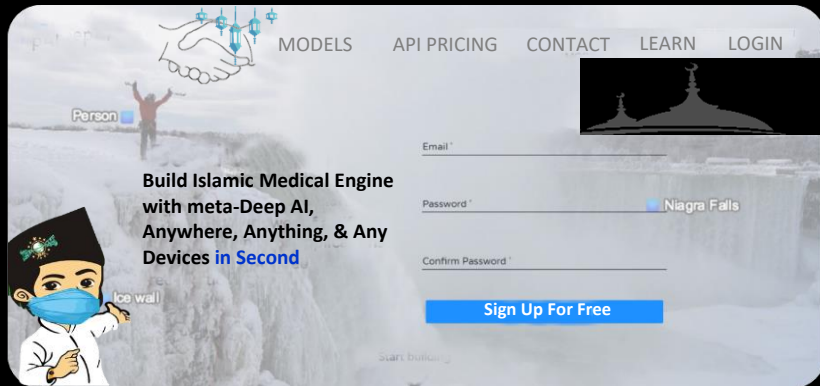


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Conclusions & Future Work



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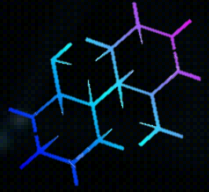


Build **Islamic Medical Engine**
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- Design Framework as Prototype Islamic Medical Engine have been done to build. If it has been implemented to Development for Sustainable in the next Research, In Sha Allah, must contains truth. Because it taken from the Qur'an and Hadith which have absolute truth.
- If limitations are found from the result of Research, then it's absolute because the method used is not appropriate as the technology foundation or the data collected is not valid because human error.
- Suggestions for future research can be tried directly to development Smart App based Islamic Medical Engine by giving the additional variable weight (w) for each herbs obtained in the fitness formula as a knowledge base for priority, for example, to making the composition of herbs with mixtures.

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Thank You

#Lab. Computational Intelligence (a.k.a KC) Filkom UB
#Presenter on International Conferences ICONETOS 2020
#Fight to Covid-19



By: Imam Cholissodin | imamcs@ub.ac.id

Lecturer of Faculty Of Computer Science (a.k.a FILKOM) UB



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