MAHMUD ISNAN

Address : Mandailing Natal, North Sumatera, Indonesia
Phone : (+62) 82160985691 ; **Email :** mahmudisnan18@gmail.com
Webiste: https://mahmudisnan.my.id/

EDUCATION

Artificial Intelligent and Internet of Things - *SIIT, Thammasat University, Thailand*   08/2020 - 07/2022
- I completed my master's degree at TAIST-Tokyo Tech program. This is a collaboration between Sirindhorn International Institute of Technology (SIIT) at Thammasat University, National Science and Technology Development (NSTDA) and Tokyo Institute of Technology, Japan. I was working on mapping poverty using machine learning, satellite imagery, and crowd-sourced geospatial information.

Non Degree in Artificial Intelligence - *Institut Teknologi Sepuluh Nopember, Indonesia*   07-08/2019
- Fresh Graduate Academy Digital Talent Scholarship. Final project was SMS classification using machine learning.

Information Systems - *STMIK Indonesia Padang, Indonesia*   09/2014 - 09/2018
- Specialized in System Analyst and Database Administrator. My bachelor's thesis was the application of android-based hospital mapping in Padang city using the framework Laravel and React-Native.

PROFESSIONAL EXPERIENCE

- **AI Researcher -**   01/2023 - Present
  NVIDIA-Artificial Intelligence Research & Development Center (AIRDC)
  and Bioinformatic and Data Science Research Center (BDSRC)
  (https://research.binus.ac.id/airdc/) (https://research.binus.ac.id/bdsrc/)
  Conducting research (mostly in AI fields, especially in machine learning, image processing, and remote sensing. Managing, maintaining and installing servers of AIRDC for model training, application deployment, & data storage purposes. Building and deploying apps. Collaboration with private and public institutions to conduct studies, primarily regarding applications of ML and DL in different sectors.
- **Board of editors -** *Indonesian Journal of Computer Science*   03/2022 - Present

TEACHING ACTIVITIES

- Lecturer: AI and Data Mining - *Universitas Tangerang Raya*   03/2023 - Present
- Teaching Assistant: Fundamental of Deep Learning - *NVIDIA DLI*   10/2023
- Mentor: Web Development Class - *Kafekoding.com*   02/2016 - 08/2018

CONFERENCES AND PUBLICATIONS

- **Evaluation of Childhood Stunting Reduction Treatments in Indonesia**   2024
  https://doi.org/10.1038/s41598-024-61462-z
- **A Hybrid CNN-SVM Approach for Malaria in Blood Cell Detection**   2024
  Karnyoto, A.S., **Isnan, M**., Pardamean, B. https://doi.org/10.1109/ICoSEIT60086.2024.10497463
- **Principal component analysis implementation on machine learning in diabetes classification**
  Tantowen, M., Putra, K., **Isnan, M**., Pardamean, B. https://doi.org/10.28919/cmbn/8492   2024
- **Air Temperature for Sustainable Airport Infrastructure and Environment**   2024
  Rahutomo, R., Hidayat, A.A., **Isnan, M**., B Pardamean.
  https://doi.org/10.1088/1755-1315/1324/1/012010

- **Machine Learning Approach with Environmental Pollution and Geospatial Information for Mapping Poverty in Thailand** 2023
  Isnan, M, Horanont, T., and Plangprasopchok, A. https://doi.org/10.1007/978-3-031-16217-6_12
- **Detecting Ganoderma Basal Stem Rot Disease on Oil Palm Using Artificial Neural Network Method** 2023
  Kurniawan, M. A., Trinugroho, J. P., Suparyanto, T., **Isnan, M**., Sudigyo, D., & Pardamean, B. https://doi.org/10.28919/cmbn/7911
- **Indonesian Agricultural-crops Classification Using Transfer Learning Model** 2023
  Isnan, M., Hidayat, A.A., Pardamean, B. https://doi.org/10.1016/j.procs.2023.10.510
- **Sentiment Analysis for TikTok Review Using VADER Sentiment and SVM Model**
  Isnan, M., Elwirehardja, G.N., Pardamean, B. https://doi.org/10.1016/j.procs.2023.10.514 2023
- **Machine Learning Approach for Single Nucleotide Polymorphysm Selection in Genetic Testing Results** 2023
  Trinugroho, J.P., Hidayat, A. A., **Isnan, M**., Pardamean, B. https://doi.org/10.1016/j.procs.2023.10.501
- **Aggregating Structural Features for Computational Analysis of Mutations in BRCT Domains of BRCA1 Protein.** 2023
  Hidayat, A.A., Nirwantono, R., **Isnan, M.**, Trinugroho, J.P., Pardamean, B. https://doi.org/10.1109/ICIMCIS60089.2023.10349062
- **Trends, Opportunities, and Challenges in Detecting Depressive Disorders Through Mobile Devices: A Review** 2023
  Elwirehardja, G.N., **Isnan, M**., Anzaludin, P., Kahlil, M., Pardamean, B. https://ieeexplore.ieee.org/abstract/document/10249859
- **Digital Twin (DT) Smart City for Air Quality Management** 2023
  Dedy, A., **Isnan, M**., Rahutomo, R., Pardamean, B. https://doi.org/10.1016/j.procs.2023.10.554
- **A Systematic Literature Review of Deep Learning Application in Multiclass Anomaly Detection for Chest Medical Imaging.** 2023
  Philips, Pardamean, B., Elwirehardja, G.N., **Isnan, M**. https://doi.org/10.1109/IC2IE60547.2023.10330925
- **PYCON ID (Python Conference Indonesia)** 2021
  As a speaker on the topic "Python for Land Monitoring Using GeeMap".
- **PYJAMAS Conference 2021** 2021
  As a speaker on the topic "Classification of Satellite Imagery Using Python".

AWARDS

- Awardee TAIST-Tokyo Tech Scholarship 08/2020 - 08/2022
- Awardee Digital Talent Scholarship From Ministry of Communication and Information Technology of Indonesia 07/2019
- The Finalist in Entrepreneur Award, KOPERTIS X, Indonesia 12/2017
- PERMATA Scholarship 09/2017 - 01/2018
- The Finalist in DAQ Competition of 15 th MTQMN 2017 in Malang 08/2017
- BIDIKMISI Scholarship 08/2016 - 08/2018

CERTIFICATES OF COMPETENCE

- Disaster Risk Monitoring Using Satellite Imagery by NVIDIA 12/2023
- Fundamental of Deep Learning by Deep Learning Institute of NVIDIA 10/2023
- Data Science for Everyone by Datacamp 06/2022
- Introduction to Data Science in Python by Datacamp 06/2022
- Certificate of Competence for Intermediate Programmer by Computer Professional Certification Institution, Indonesia. 09/2018
- Database Design and Programming With SQL Oracle Academy 09/2018

PROJECTS AND INTELLECTUAL PROPERTIES

- [InDRY](): Intelligence Diagnosis of Radiology Images. 2024
- [STASSY](): Toddler Stunting Status Classification Module. IP Number: EC00202403586. 2024
- [BDSS]() (Bioinformatics & Data Science Sphere): Private Dataset Management Application. IP Number: EC00202402460. 2024

TECHNICAL SKILLS

- Programming Skills: JavaScript, PHP, SQL, Python, MATLAB, TensorFlow, PyTorch.
- Applications : Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Data Analytics, MS Visual Code, ArcGIS, QGIS, Google Earth Engine.
- Operating Systems : Windows, Mac OS and Linux.

NOTABLE ORGANIZATIONAL/LEADERSHIP EXPERIENCES

- Head of Information Technology **-** *PPIDK Asia-Oseania* 09/2021 - 09/2022
  Develop and provide support in the form of managing information technology applications, managing information and public communication to all Indonesian student organizations in 14 countries from China in the north to New Zealand in the south.
- Head of Arts, Culture, and Sports **-** *PPI Thailand (PERMITHA)* 02/2021 - 02/2022
  PPI Thailand (Overseas Indonesian Students' Association Alliance in Thailand).
  Mediating and facilitating the artistic talents and abilities of all Permitha members, and cooperating with the education and culture of the Indonesian Embassy in Bangkok in promoting Indonesian culture in Thailand.
- Founder/Coach **-** *Badan PKM STMIK Indonesia Padang* 01/2018 - 08/2018
  Facilitate the potential of students to study, develop and apply science and technology.
- Minister of Information and Communication - *Student Executive Board* 04/2018 - 09/2018
  Coaching and providing support to all student organizations in the form of informatics application management, information management and public communication.
- Vice Chairman - *Kafekoding* 01/2016 - 02/2018
  Kafekoding is a student community in technology and education with the purpose to share knowledge about the development of information technology to society by providing free classes to more than 200 members every single week, especially in the field of programming languages.
- Student Representative Council - *STMIK Indonesia Padang* 02/2015 - 02/2016
  Leading more than 1000 students to make changes to existing law and pass new student legislation based on constituents' need, especially in governance of public complaint.