

Robby Arifandri

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EDUCATION

Institut Teknologi Bandung, Indonesia

Aug 2008 – Jul 2014

Bachelor of Science in Electrical Engineering;

WORK EXPERIENCE

National Research and Innovation Agency (BRIN)

Oct 2021 – present

Software Engineer

- Created image classifier for paddy growth stage using Tensorflow and Gradio
- Developed data processing script using GEE and python for land cover modelling using deep learning
- Explored and developed child height measurement script using computer vision
- Explored oil spill segmentation using deep learning
- Contributed on development spatial data processing using python for land suitability analysis

Agency for The Assessment and Application of Technology (BPPT)

Feb 2018 – Oct 2021

Software Engineer

- Implemented Indonesian Fire Danger Rating System (FDRS) data automation pipeline from ECMWF weather forecast product, calculation of CFFDRS, ILWIS processing, to visualization in web using open-source technologies
- Worked together with IBM Garage Singapore co-creating peatland ground water level prediction for weather modification web app
- Developed data pipeline, API, and Telegram notification for coastal tomography data products
- Managed ArcGIS Enterprise installation for Indonesia National Oceanographic Data Center (NODC)
- Developed APRS to MQTT gateway parser, deployed and managed IoT server for environmental sensor network

Xtremax Teknologi Indonesia

Sept 2016 – Jan 2018

Backend Developer

- Installed, managed, and developed Sitecore and Sitefinity websites
- Developed payment gateway using Paypal API

Elephant Talk Indonesia

Aug 2015 – Aug 2016

Junior C# Developer

- Developed web client and API for telecommunication CRM project
- Implemented text notification service from Twilio

Oberthur Technologies Indonesia

Nov 2014 – Aug 2015

R&D Software Developer Engineer

TRAINING

ArcGIS Enterprise for Ina-NODC BPPT Training

July 2021

ESRI Indonesia

- ArcGIS Enterprise Base Deployment in Linux, Overview of ArcGIS Enterprise.

Associate Google Cloud Engineer Certification – Digitalent Scholarship

Jun – Aug 2020

Ministry of Communication and Information Technology (Kominfo), Indonesia

- Associate Google Cloud Certification (Certification ID: JW3PDp)
- Part of Digitalent Scholarship program funded by Kominfo

Capacity Building on National Total Factor Productivity based on Big Earth Data Analysis

Nov - Dec 2019

RESTEC, Tokyo, Japan

- Introduction of Earth Satellite System and Big Data, Geospatial Data Analysis using Google Earth Engine, Big Data Application in Disaster Risk Reduction.
- RESTEC and JAXA site visit

JOURNAL PUBLICATIONS

- Hakim, A. M. Y., Martono, D. N., Santosa, B. H., Sencaki, D. B., Prayogi, H., **Arifandri, R.**, Apip, Ningrum, W., Schröter, K., Steinhausen, M. J., Exploring Land Cover Change Impacts on Ecosystem Services using Machine Learning Technique and Scenario Simulation: A Case Study of The Upper Citarum River Basin, Indonesia. (est. 2025). *Modeling Earth Systems and Environment* (Accepted Feb 2025, awaiting Publication).
- Sencaki, D. B., Putri, M. N., Santosa, B. H., Arfah, S., **Arifandri, R.**, Afifuddin, Habibie, M. I., Putra, P. K., Anatoly, N., Permata, Z. D. O., Frederik, M. C. G., Agustan, Sumargana, L., & Priyadi, H. (2023). Land cover multiclass classification of wonosobo, Indonesia with time series-based one-dimensional deep learning model. *Remote Sensing Applications: Society and Environment*, 32, 101040.

PEER-REVIEWED CONFERENCE PAPERS

- **R. Arifandri** et al., "Mapping Shallot in Lowland Areas Through Sentinel-2 Imagery and Machine Learning Approach," *The 10th International Seminar on Aerospace Science and Technology (ISAST 2024)*, Bali, Indonesia, 2024.
- J. S. Matondang, H. Sanjaya, and **R. Arifandri**, "Development of Google Earth Engine Fire Weather Index Calculator for Indonesian Fire Danger Rating System," *Geomatics International Conference 2021 (GeoICON 2021)*, Surabaya, Indonesia, 2021.
- Y. Adityawarman, J. S. Matondang and **R. Arifandri**, "Open Source Environmental Sensor Integrated Platform Solution Based on APRS and MQTT," *2019 IEEE Asia-Pacific Conference on Geoscience, Electronics and Remote Sensing Technology (AGERS)*, Jakarta, Indonesia, 2019
- Agustan, S. Yulianto, Anisah, **R. Arifandri**, F Alhasanah, L Sumargana, and Heri Sadmono. "Sentinel-1 Dual-Polarization Data Analysis to Identify Paddy Growth Stages in Indramayu District." *The 4th International Conference of Indonesian Society for Remote Sensing (ICOIRS 2018)*, Makassar, Indonesia, 2018.

PROJECTS

Paddy Growth Stages Classifier using Deep Learning

Developed paddy growth stages classifier based on paddy images from ground survey

<https://huggingface.co/spaces/robbyarif/paddy-growth-stages-classifier>

Extract-Transform-Load (ETL) Scripts for Coastal Acoustic Tomography

Developed processing scripts from coastal acoustic tomography device and its API

ORGANIZATION

Indonesia Remote Sensing Society (MAPIN/ISRS)

2020 - present

Web administrator, Membership Manager

HONORS & AWARDS

Finalist in Finhacks Hackathon 2016 Bank Central Asia

Mar 2016

Developed “Easy Credit Card”, an android app that create virtual Master Card/Visa credit card using BCA eWallet API. Qualify to 8-finalists round presenting to BCA top management.

Finalist in Aplicative Robot Category

August 2014

Developed "Robofish: An Autonomous Robotic Fish", an underwater fish-shaped robot, on Indonesian ICT Award 2014 (INAICTA 2014) held by Indonesian Ministry of Communication and Information.

2nd Winner in Green Energy Innovation Category

May 2014

“Portable Energy Harvester for Phone Charger”

Designed and built Solar Power Bank on Competition of National Electrical Products 2014 (LCEN 2014) held by Electrical Engineering Student Association at Institut Teknologi Sepuluh November-Surabaya.

SERVICE AND VOLUNTARY

Mentor, Head of Public Relation Division

Feb – August 2013

Cakra Wahana Paksa, West Bandung

Advocated, tutored, and mentored high school students on college enrolment and scholarship information to pursue higher education in rural area.

SKILLS

- Language & Certification: Bahasa Indonesia (Native), English: Duolingo English Test 130, TOEFL ITP 627
- Programming Languages: C, Python, PHP, JavaScript, HTML
- Technologies: Google Cloud, Amazon Web Services, Docker, Google Earth Engine
- Misc: git, MQTT, web development, Django, Flask