

PRISCILLA INDIRA OSA

LANGUAGE SKILLS

Mother Tongue : Indonesia

English IELTS 7.5 (taken in 2020)	Japanese JLPT N1 (taken in 2015)
Listening : 7.5 / C1	Listening : C1
Reading : 7.5 / C1	Reading : B2
Speaking : 7 / C1	Speaking : C1
Writing : 7 / C1	Writing : C1

HONOURS AND AWARDS

- **Best poster award**
August 2024
Awards related to EURASIP - IEEE SPS Summer School on Remote Sensing and Microscopy Image Processing
- **Best project award**
August 2024
Awards related to EURASIP - IEEE SPS Summer School on Remote Sensing and Microscopy Image Processing
- **French Government Scholarship Holder (BGF)**
August 2021 - August 2023
Master's degree scholarship
- **Japanese Government (MEXT) Scholarship Student**
April 2013 - March 2018
Scholarship covering Japanese language school, vocational school, and Bachelor's degree
- **Microsoft Japan Award**
February 2016
Award given for the graduation project of the vocational school

VOLUNTEERING

- **Python foundation recap tutor**
ReDI School of Digital Integration
October 2022 - December 2022
Recap lessons that had been taught to make sure students understand the content before proceeding to next lessons

EDUCATION AND TRAINING

DOCTOR OF PHILOSOPHY

University of Genoa, STIET, DITEN department
November 2023 - present -- Genoa, Italy

Research keywords: Machine Learning, Neural Networks, Remote Sensing, Image Analysis

MASTER OF SCIENCE

MSc Environmental Hazards and Risks Management, Université Côte d'Azur
September 2021 - August 2023 -- Nice, France

Theoretical courses: Earthquake, Agricultural Risks, Flooding, Forest Fires, Mass Movement, Land Use and Cover Change, Ecology, Climate Change, etc.

Technical courses: Mathematical modelling (Python), Statistics (R), GIS & Remote Sensing (ArcGIS Pro), Soil erosion modelling (TerrSet), Agent-based modelling (GAMA platform), Hydrological modelling (HEC-HMS), Statistics of extreme events (R), etc.

Master 1 internship report: Multi-classifier Pipeline for Olive Groves Classification

Master 2 internship report: Gabor Feature Network for CNN-based and Transformer-based Bitemporal Remote Sensing Building Change Detection Models

BACHELOR OF ENGINEERING

Department of Artificial Intelligence, School of Computer Science and Systems Engineering, Kyushu Institute of Technology
April 2016 - March 2018 -- Iizuka, Japan

Thesis : The Proposal of Co-occurrence Shape Feature for LIDAR-based Pedestrian Recognition (LIDARを用いた歩行者検出のための共起形状特徴量の提案)

Detail : Extracting features from raw 3D point cloud data, processing the data (clustering with K-nearest neighbor, Principal Component Analysis, etc) and classifying the object (pedestrian) using Support Vector Machine (SVM). The project was done using MATLAB. A small project using Histogram of Oriented Gradient (HOG) feature was done prior to research project.

DIPLOMA

Information Processing Course, Seifu Institute of Information Technology
April 2014 - March 2016 -- Osaka, Japan

Graduation project : Scheduling Application with voice recognition (Windows application)

Detail : A calendar application to which user can add or ask schedules using voice command. Platform used was Microsoft Visual Studio and languages used were C#, SQL, XML, SSML.

JAPANESE LANGUAGE

Osaka Japanese Language Education Center
April 2013 - March 2014 -- Osaka, Japan

WORK EXPERIENCE

INTERNSHIP

INRIA, February 2023 - July 2023 -- Sophia Antipolis, France

- Research theme: Building change detection from bi-temporal remote sensing images using Deep Learning method
- Research collaboration with University of Szeged, Hungary

PROJECT ACTIVITIES

- **RETURN, Natural, man-made and environmental risks**, funded within the National Recovery and Resilience Plan (PNRR) (Next Generation EU). Project coordinator: University of Naples, Italy. (2022-2025)
- **Climate Change Initiative Extension (CCI+) Phase 2** – New Essential Climate Variables – High Resolution Land Cover funded by the European Space Agency (ESA) and coordinated by Prof. L. Bruzzone, University of Trento, Italy (2024-2027)
- **SCOLive** funded by Space for Climate Observatory (SCO) with the collaboration between ACRI-ST, Argans France, Communauté d'Agglomération du Pays de Grasse, and French space agency (CNES) (Started in 2021)

INTERNSHIP

ACRI-ST, April 2022 - June 2022 -- Sophia Antipolis, France

- Build a pipeline for Olive Groves classification
- Optimize Machine Learning-based classification model
- Perform satellite imagery acquisition and simple spectral analysis

Technical Experience/Skills

- Data : Sentinel-2
- Programming language : Python
- Library : PyTorch, Orfeo Toolbox, Gdal, Rasterio, Geopandas, Scikit-learn, etc
- Environment : Ubuntu 20.04, GitLab
- Software : QGIS

AI (ARTIFICIAL INTELLIGENCE) ENGINEER

Nodeflux, June 2019 - July 2021 -- Jakarta, Indonesia

- Manage image data (collection, annotation, quality assessment)
- Work with AI model or mathematical model (model training, finetuning and hyperparameter optimization)
- Research and experiment on methods and architectures
- Write technical and research reports
- Design and build pipelines which utilize AI model to provide solutions to real-world problems such as Surveillance (Vehicle detection, Social Distance Recognition, License Plate Recognition), Optical Character Recognition, etc

Technical Experience/Skills

- Programming language : Python, C
- Framework, library : Darknet, PyTorch, OpenCV, Numpy, Pandas, etc
- Environment : Ubuntu 18.04, Docker, GitLab
- Server : AWS, GCP

PROGRAMMING INSTRUCTOR

KodeKiddo, November 2018 - May 2019 -- Medan, Indonesia

- Assist children to learn computer programming
- Help children understand the concept of algorithm and computational thinking
- Evaluate children's performance
- Take part in promotional events such as programming workshops
- Help making curriculum for short courses such as holiday program

PUBLICATIONS

- "Research on Feature Descriptors for Vehicle Detection by LIDAR", Takuma Oiwane, Priscilla Indira Osa, Shuichi Enokida, EECSS 2019 – The 5th World Congress on Electrical Engineering and Computer Systems and Science.
- "Multi-Classifer Pipeline for Olive Groves Detection", Priscilla Indira Osa, Anne-Laure Beck, Louis Kleverman, Antoine Mangin, Applied Sciences, 2023, 13(1), 420; <https://doi.org/10.3390/app13010420>
- "Gabor Feature Network for Transformer-based Building Change Detection Model in Remote Sensing", Priscilla Indira Osa, Josiane Zerubia, Zoltan Kato. ICIP 2024 – IEEE International Conference on Image Processing, Oct 2024, Abu Dhabi, United Arab Emirates; 10.1109/ICIP51287.2024.10647697
- "AYANet: A Gabor Wavelet-based and CNN-based Double Encoder for Building Change Detection in Remote Sensing", Priscilla Indira Osa, Josiane Zerubia, Zoltan Kato. ICPR 2024 – 27th International Conference on Pattern Recognition, Dec 2024, Kolkata, India.
- "A Comparative Study of Unsupervised Winter/Summer Crop Classification Methods for FPAR Image Time Series", Priscilla Indira Osa, Roozbeh Rajabi, Gabriele Moser, Sebastiano B Serpico, Josiane Zerubia, IEEE IGARSS 2025 – International Geoscience and Remote Sensing Symposium, Aug 2025, Brisbane, Australia.
- "Joint Deep Missing Value Imputation and Clustering of Satellite Image Time Series", Priscilla Indira Osa, Gabriele Moser, Sebastiano B Serpico, Josiane Zerubia, EUSIPCO 2025 – 33rd IEEE European Signal Processing Conference, Sep 2025, Palermo, Italy.