ROBIN JACOB ROY

Machine Learning Researcher, airis4D

@ robinjacobroy1@gmail.com   📞 (+91) 8113980670   in linkedin.com/in/robin-jacob-roy-b0599a140/
github.com/robinjacobroy   ID orcid.org/0000-0003-3001-4692

RESEARCH EXPERIENCE

Machine Learning Researcher
airis4D

📅 June 2019 – PRESENT   📍 Thelliyoor, Kerala

- Developed Computer Vision model for activity recognition of Drosophila melanogaster using Convolutional Neural Network(CNN).
- Developed Odonata detection algorithm using YOLO architecture.
- Involved in generating semantic segmentation algorithm for delineating tree canopies from satellite images.

Machine Learning Intern
Santhom Computing Facility

📅 June 2018 – June 2019   📍 Kozhencherry, Kerala

- Developed Computer Vision tools for labeling protein particles present in Cryo-Electron micrographs.
- Developed Image processing algorithms for species identification of freshwater fishes from underwater camera feeds.

SKILLS

Python   Machine Learning   OpenCV   Tensorflow   Keras
PyTorch   Scikit-Learn   Matplotlib   Numpy   Scipy   C++
Git   LaTeX   Vim   SQL

PUBLICATIONS AND PRESENTATIONS

- Blesson George, Anshul Assaiya, **Robin Jacob Roy**, Ajit Kembhavi, Radha Chauhan, Geetha Paul, Janesh Kumar, Ninan Sajeeth Philip. *"CASSPER is a semantic segmentation-based particle picking algorithm for single-particle cryo-electron microscopy"*. **Communications Biology - Nature.** February 2021.

Conference Presentations:

- **Robin Jacob Roy**, Ligi Cherian, Ninan Sajeeth Philip. "Image Enhancement using Deep Learning GAN" at the National Seminar, NSAMAP-2023, organized by St. Thomas College Kozhencherry in January 2023.
- Geetha Paul, **Robin Jacob Roy**, Gigi K Joseph, Ninan Sajeeth Philip. "Classification and Quantification of Odonata Biodiversity using Machine Learning Methods". SciCon Series - 3rd International Conference 'In Sync - With Next Generation Biosciences(INGB)-2019'.
- Geetha Paul, Blesson George, Linn Abraham, **Robin Jacob Roy**, Ninan Sajeeth Philip. "Preliminary classification of fish fauna in Western Ghats using machine learning tools". SciCon Series on 'Research Interventions and Advancements in Life-science(RIAL-2018)'.
- *Poster Presentation:* **Robin Jacob Roy**, Geetha Paul, Ninan Sajeeth Philip. "Automated Feature Extraction and Classification of Odonates" at the National Seminar, SIAP-2019, organized by Govt. Women's College, Thiruvananthapuram in October 2019.

EDUCATION

M.Phil in Physics
Mahatma Gandhi University, Kerala

📅 2018 - 2020   CGPA: 8.2/10.0

Dissertation: **Automated Identification of Physical Properties of an Object for its Classification based on Machine Learning Methods.** Advisor: Dr. Ninan Sajeeth Philip.

M.Sc in Physics
Mahatma Gandhi University, Kerala

📅 2015 - 2017   CGPA: 2.85/4.0

Project: **Classification of Transients Using Machine Learning Methods.**

B.Sc in Physics
Mahatma Gandhi University, Kerala

📅 2012 - 2015   CGPA: 3.20/4.0

Specialization: **Astronomy and Astrophysics.**

CERTIFICATIONS

- Diploma in Computer Assembling and Maintenance(UGC).
- Online Distance Learning Certificate on "Machine learning to Deep Learning: A journey for remote sensing data classification" - Indian Institute of Remote Sensing (IIRS), Indian Space Research Organization (ISRO).
- Geodata Processing using Python - Indian Institute of Remote Sensing (IIRS), Indian Space Research Organization (ISRO).
- Generative Adversarial Networks (GANs) Specialization - Coursera.
- Natural Language Processing in TensorFlow - Coursera.
- Convolutional Neural Networks in TensorFlow - Coursera.

HONORS & AWARDS

- Best Paper Presentation Award for the work "Image Enhancement using Deep Learning GAN" at the National Seminar, NSAMAP-2023, organized by St. Thomas College Kozhencherry in January 2023.
- Best Poster Presentation Award for the Poster "Automated Feature Extraction and Classification of Odonates" at the National Seminar, SIAP-2019, organized by Govt. Women's College, Thiruvananthapuram in October 2019.

REFERENCES

Dr. Ninan Sajeeth Philip
@ IUCAA, Pune

✉ nspp@associates.iucaa.in

Visiting Professor [IUCAA, Pune],
Dean and Director,
Artificial Intelligence Research and Intelligent Systems (airis4D),
Thelliyoor, Kerala, India.
mob:+91 9496552479

Dr. Sinu Mathew,
@ St. Berchmans College, Changanacherry,

✉ pmsmathew@gmail.com

Assistant Professor,
St. Berchmans College,
Changanacherry,
Kerala, India.
mob: +91 9496944541