Sunil C K, Ph.D.

Assistant Professor
Deprtment of Computer Science and Engineering
Indian Institute of Information Technology, Dharwad

Email : sunilck@iiitdwd.ac.in
sunilchinnahalli@gmail.com
Mobile : +91-8660346103

Author Identifiers

Google Scholar: https://scholar.google.com/citations?user=3el$_v nsAAAAJhl = enauthuser = 1oi = sra$
ORCID: https://orcid.org/0000-0002-1217-891X
Scopus ID: 57224694127
WoS Researcher ID: GVS-0017-2022

Education

- **NITK, Surathkal** — Mangaluru, India
  Ph.D -IT — *Dec 2018 - Jan 2023*
- **UVCE, Bangalore University** — Bengaluru, India
  ME- Software Engineering — *Oct 2013 - Dec 2015*
- **KVGCE, VTU, Belagavi** — Sullia, India
  BE- Computer Science and Engineering — *Aug 2005 - Aug 2009*

Ph.D Thesis

- **Title**: Plant Disease Detection Using Deep Learning-based Approach
- **Institute**: National Institute of Technology Karnataka, Surathkal
- **Viva-Voce Date**: 24^{th} August 2023

Publications

Journal Papers

1. Guowei Dai, Zhimin Tian, Jingchao Fan, **Sunil CK**, Christine Dewi (2023) "DFN-PSAN: Multi-level deep information feature fusion extraction network for interpretable plant disease classification ", *Computers and Electronics in Agriculture*, Pages 108481, DOI: 10.1016/j.compag.2023.108481 **Scopus/SCIE/IF:8.3**

2. **Sunil C K**, Jaidhar C D, and Nagamma Patil, "Systematic study on Deep Learning-based plant disease detection or classification ", *Artificial Intelligence Review, Springer*, Pages 1–98, DOI: 10.1007/s10462-023-10517-0 **Scopus/SCI/SCIE/JCR/IF:12**

3. **Sunil C K**, Jaidhar C D, and Nagamma Patil (2023), "Tomato Plant Disease Classification using Multilevel Feature Fusion with Adaptive Channel Spatial and Pixel Attention Mechanism ", *Expert Systems With Applications, Elsevier*, Volume:228, Pages 120381, DOI: 10.1016/j.eswa.2023.120381. **Scopus/SCIE/IF:8.5**

4. **Sunil C K**, Jaidhar C D, and Nagamma Patil (2021), "Cardamom plant disease detection approach using efficientNetV2 ", *IEEE Access*, Volume: 10, Pages 789–804, DOI 10.1109/ACCESS.2021.3138920. **Scopus/SCIE/JCR/IF:3.9**

5. **Sunil C K**, Jaidhar C D, and Nagamma Patil (2022), "Binary class and multi-class plant disease detection using ensemble deep learning-based approach ", *International Journal of Sustainable Agricultural Management and Informatics*, Volume: 8, Issue: 4, Pages 385–407 DOI 10.1504/IJSAMI.2022.10050415. **Scopus/ESCI/IF:1.2**

Conference Papers

1. Savitri Kulakarni, Keerthi Ready, **Sunil CK** Shubhodeep Pal Shreekanth Dash, P Deepa Shenoy, and Venugopal K R (2023), "Coffee Plant Disease Identification using Enhanced Short Learning EfficientNetV2", In 20^{th} *IEEE India Council Conference (INDICON 2023),* held at **CMRIT, Hydrabad**, India. **(Accepted and Presented)**. **Scopus**

2. **Sunil C K**, Jaidhar C D, and Nagamma Patil (2020), "Empirical Study on Multi Convolutional Layer-based Convolutional Neural Network Classifier for Plant Leaf Disease Detection", In 15^{th} *IEEE International Conference on Industrial and Information Systems (ICIIS 2020),* held at **IIT Ropar**, India. Pages 460–465, DOI 10.1109/ICIIS51140.2020.9342729. **Scopus and Core Rank C**

3. **Sunil C K**, Sujan Reddy, Shashikantha G Kanber, Sandeep V R and Nagamma Patil (2023), "Comparative Analysis of Intrusion Detection System using ML and DL Techniques", In 22^{nd} *International Conference on Hybrid Intelligent Systems (HIS 2022),* Lecture Notes in Networks and Systems, vol 647. Springer, Cham. DOI:10.1007/978-3-031-27409-1_67. **Scopus and Core Rank C**

4. Nirmal Kedkar, Kotla Karthik Reddy, Hritwik Arya, **Chinnahalli K Sunil**, and Nagamma Patil (2023), "Vehicle Re-identification Using Convolutional Neural Network", In 4^{th} *International Conference on Advances in Distributed Computing and Machine Learning (ICADCML)-2023* held at **NIT Rourkela**, India. Lecture Notes in Networks and Systems, vol 660. Springer, Singapore.DOI: 10.1007/978-981-99-1203-2_35 **Scopus**

5. Akashdeep S, Akshith Nettar Mahalinga, Harshvardhan R, **Chinnahalli K Sunil**, and Nagamma Patil (2022), "Using stacking ensemble method for rental bike prediction", In *International Conference on Intelligent Computing Systems and Applications,* held at **NIT Silchar**, India. **(Accepted and Presented)**. **Scopus**

Book Chapters

1. **Sunil CK** and Jaidhar CD (2024), "An Efficient Infectious Disease Detection in Plants Using Deep Learning", 3^{rd} PhD Research Symposium, In 20^{th} *International Conference on Distributed Computing and Intelligent Technology (ICDCIT-2024),* will be held at **KIIT, Bhubaneswar**, India. **(Accepted and Presented)**. **Scopus**

Exams (Computer Science and Information Technology)

GATE-2023
UGC NET–2018, 2019, and 2022

Skills Summary

- **Languages**: C, Java, Python

Research Experience

1. Conducted research on AI applications in agriculture, including image recognition for pest, disease, and nutrition deficiency identification.
2. Spearheaded AI-driven projects in agriculture, focusing on crop yield prediction, disease detection, and precision farming.
3. Weed Detection and classification using Deep learning approach.
4. Collaborated with cross-functional teams to integrate AI solutions into existing agricultural processes.
5. Anomaly detection

Certifications

Coursera

1. Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning.
2. Neural Networks and Deep Learning

Oracle Academy

1. Java Fundamentals

NPTEL

1. Machine Learning

Extra Curricular Activities

- Represented NITK in All India Inter-NIT athletics and won two medals in 2022 held at NIT Jaipur.
- I won six medals in VTU athletics meet during 2007-2009.
- Represented VTU in Inter-University athletics meet.
- Took part in various open runs and marathons and have won in a few events.
- Agriculture, yoga, running, and playing tennis are my hobbies.

Current Address

Department of Computer Science and Engineering
Room No: F123 *e* Block
IIIT Dharwad
Karnataka-580009

Permanent Address

Chinnahalli Village
Sakaleshpur Taluk
Hassan District
Karnataka-573123