Dr. Ankush D. Sawarkar, PhD VNIT Nagpur.

1. Personal Information

- **Name**: Dr. Ankush Dadarao Sawarkar

- **Position**: Assistant Professor

- **Department**: Information Technology

- **Contact Information**: adsawarkar@gmail.com, SD Lab IT Dept, 2462 269 204.

2. Educational Background

- **Degrees**:

📅 July 2019 – July 2023

CGPA :8.57/10

Doctor of Philosophy (PhD) in Department of Computer Science & Engineering

Visvesvaraya National Institutes of Technology (VNIT) @ Nagpur 440010, India

Thesis Title: Clustering and Classification of Commercial Bamboo Species using Machine Learning, Deep Learning, and DNA Barcoding

Supervisor: Prof. Deepti Shrimankar (**VNIT**, Nagpur),

Co-Supervisor: Sr. Scientist Dr. Lal Singh, CSIR-National Environmental Engineering Research Institute (**NEERI**), India.

📅 Aug 2012 – June 2014

CGPA :7.2/10

Master of Technology (MTech) in Computer Network & Information Security

Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET) @ Nanded 431606, India

Thesis Title: Global GAP Certification Services using mKRISHI ® platform

Supervisor: Prof. Dr. Jaishri Waghmare (SGGS, Nanded),

Co-Supervisor: Mr. Dinesh Kumar Singh (TCS, Mumbai)

📅 Aug 2007 – June 2011

Percentage:69%

Bachelor of Engineering (BE) in Computer Science & Engineering

Priyadarshini Bhagwati College of Engineering @ Nagpur 440010, India

Thesis Title: Home Security using Automated System

Supervisor: Prof. Dr. Manoj Chaudhary

3. Research Interests

- **Areas of Expertise**:

Designing of Machine Learning Automated System for plant classification
Designing and Prototyping of Deep Learning Automated System for plant classification
Designing Bioinformatics tool to classify the plant using Genomic data
Designing and Prototyping of AI and Smart Systems
Designing an enhance Algorithm for ML models.

4. Teaching Experience

- **Courses Taught**: List of courses taught (undergraduate and graduate levels).

📅 Nov 2023 –Present

Assistant Professor

Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIE&T) @Nanded 431606, India

Teaching ML/ Algorithm/ OS/ DS, etc.

📅 May 2023 –Oct 20223

Facilitator / Lecturer

Regenesys Business School @Mumbai 400703, India

Teaching ML/ AI/ DL/ MYSQL/ PYTHON, etc.

📅 Sept 2018 – May 2019

Teaching Faculty

National Institute of Technology Warangal @ Warangal 506004, India

- Teaching PSCP, Algorithm, OS, Data Structure, Unix tools

📅 Aug 2016 – May 2017

Adjunct Assistant Professor

Visvesvaraya National Institute of Technology (VNIT) @ Nagpur 440010, India

- Teaching Computer Programming, Algorithm, Operating System

📅 June 2015 – July 2016

Assistant Professor

Priyadarshini College of Engineering (PCE) @ Nagpur 440019, India

- Teaching Computer Programming, Computer Graphics, Algorithm, Operating System

📅 July 2014 – May 2015

Teaching Assistant

Visvesvaraya National Institute of Technology (VNIT) @ Nagpur 440010, India

- Teaching Computer Programming, Unix, Algorithm

📅 July 2011 – Mar 2012

Assistant Professor

Priyadarshini JL College of Engineering (PJLCE) @ Nagpur 440009, India

- Teaching Computer Programming, Computer Graphics

5. Publications and Presentations

2023 Hemant Kumar, Komal Prasad, Munesh Kumar, **Ankush D Sawarkar**, Manish Kumar, Lal Singh "Pesticide pollution in freshwater: Occurrence, distribution, impact, and remediation" In: Current Developments in Biotechnology and Bioengineering, **Elsevier [SCOPUS]** https://doi.org/10.1016/B978-0-323-91900-5.00010-2

2022 **Sawarkar, A.,** Shrimankar, D., Bokde, N., Singh, L. (2023). "Phytocapping technology for sustainable management of contaminated sites: case studies, challenges, and future prospects". In: *Phytoremediation Technology for the Removal of Heavy Metals and Other Contaminants from Soil and Water*: **Elsevier [SCOPUS]** https://doi.org/10.1016/B978-0-323-85763-5.00041-6

Journal Articles:

2024	**Sawarkar, A. D**., Shrimankar, D. D., Ali, S., Agrahari, A., & Singh, L. (2021). "Bamboo Plant Classification Using Deep Transfer Learning with a Majority Multiclass Voting Algorithm", In: *Applied Science*, **MDPI. [SCIE-2.9]** https://www.mdpi.com/2076-3417/14/3/1023
2024	Mahule A**, Sawarkar, A. D,** Pakle G**,** & Singh, L. (2021). "AquaBamboo Data-Driven Suggested System for Water Management and Sustainable Growth of Bamboo: A Review", In: *Advances in Bamboo Science*, **Elsevier.** https://doi.org/10.1016/j.bamboo.2024.100072
2024	M Kumar, SK Bhujbal, K Kohli, R Prajapati, BK Sharma**, AD Sawarkar,**" A review on value-addition to plastic waste towards achieving a circular economy" In: *Science of The Total Environment,* **Elsevier. [SCIE-9.8]** https://doi.org/10.1016/j.scitotenv.2024.171106
2023	**Sawarkar, A. D**., Shrimankar, D. D., Kumar, M., Kumar, P., Kumar, S., & Singh, L. (2021). "Bamboos as a cultivated medicinal grass for industries: A systematic review", In: *Industrial Crop and Products*, **Elsevier. [SCIE-6.6]** https://doi.org/10.1016/j.indcrop.2023.117210
2023	**Sawarkar. A**. and D. Shrimankar (2021). "Bamboo as a sustainable crop for land restoration in India: challenges and opportunities" In: *Environment, Development and Sustainability*. **Springer [SCIE,IF4.9]** https://doi.org/10.1007/s10668-023-03911-9
2023	N Ghodichor, D Sahu, G Borkar, **A Sawarkar,** " Secure Routing Protocol To Mitigate Attacks By Using Blockchain Technology In Manet" In: *arXiv preprint arXiv:2304.04254* https://doi.org/10.48550/arXiv.2304.04254
2023	M Kumar, S Sridharan, AD Sawarkar, A Shakee "Current research trends on emerging contaminants pharmaceutical and personal care products (PPCPs): A comprehensive review" In: *Science of The Total Environment,* **Elsevier. [SCIE-9.8]** https://doi.org/10.1016/j.scitotenv.2022.160031
2022	AR Durge, DD Shrimankar, **AD Sawarkar,**" Heuristic Analysis of Genomic Sequence Processing Models for High Efficiency Prediction: A Statistical Perspective", In: Current Genomics. **Springer [SCIE, IF 3.9]** https://doi.org/10.2174/1389202923666220927105311
2022	P Fuke, M Kumar**, AD Sawarkar,** A Pandey, L Singh. "Role of microbial diversity to influence the growth and environmental remediation capacity of bamboo: a review", In: *Industrial Crop and Products*, **Elsevier. [SCIE-6.6]** https://doi.org/10.1016/j.indcrop.2021.113567
2021	M Kumar, S Dutta, S You, G Luo, S Zhang, PL Show, **AD Sawarkar**," A critical review on biochar for enhancing biogas production from anaerobic digestion of food waste and sludge", In: *Journal of Cleaner Production,* **Elsevier. [SCIE-11.1]** https://doi.org/10.1016/j.jclepro.2021.127143

2021	**Sawarkar. A**. and D. Shrimankar (2021). "Traditional System Versus DNA Barcoding in Identification of Bamboo Species: A Systematic Review" In: Molecular Biotechnology. **Springer [SCIE, IF 2.86]** https://doi.org/10.1007/s12033-021-00337-4
2020	**Sawarkar. A.** and D. Shrimankar (2020). "Commercial clustering of sustainable bamboo species in India" In: Industrial Crop and Products, **Elsevier [SCIE, IF 6.449]** https://doi.org/10.1016/j.indcrop.2020.112693

- **Conference Papers**:

2023	Santosh K. Sahu, **Ankush D Sawarkar**, Ajay Kumar Sahu, Akhil Anjikar, Amol P Bhopale, Jagdish Chakole (2023) " Analysis of Transfers Learning Techniques for Early Detection and Grading of Diabetic Retinopathy on Retinal Images" *ICACTA,* **Mumbai, India.** IEEE *(SCOPUS)* https://doi.org/10.1109/ICACTA58201.2023.10392325
2023	**Sawarkar, A.,** Shrimankar, D., Bokde, N., Singh, L. (2023). "Commercial Clustering of Indian Bamboo Species Using Machine Learning Techniques". In: *PCEMS 2023,* **VNIT Nagpur,** India: IEEE *(SCOPUS)* https://doi.org/10.1109/PCEMS58491.2023.10136094
2023	**Sawarkar, A.,** Shrimankar, D., Singh, L. (2023) "Commercial Indian Bamboo Species Classification on matK DNA Barcode Sequences using Machine Learning Techniques with K-mer. In *IC2E3,* **NIT Uttarakhand***, IEEE (SCOPUS)* https://doi.org/10.1109/IC2E357697.2023.10262781
2015	**Sawarkar., A.** and A. Pande and S.Singh (2015). "Innovation for Crop Qualify Certification using ICT". In: AGRINETS Workshop COMSNETS, 2015.Banglore, India: IEEE. https://doi.org/10.1109/COMSNETS.2015.7098725
2014	**Sawarkar, A.D**., Waghmare, J., (2014). "Query Processing and Query Optimization in Distributed Database: A Survey", In: International Conference in on Computer Science, Electronics and Communication Engineering 2014. ICCECE, Pune, India, pp. 1–7.

- **Editorial Work**: Work as a journal editor or reviewer.

    1. **Cureus Journal of Computer Science:** Editor
    2. **Industrial Crops** and **Products** is an international journal : Reviewer (SCIE)
    3. **Waste Disposal** & **Sustainable Energy** (WDSE) is an international journal: Reviewer
    4. *Journal of Engineering Research and Sciences:* Reviewer
    5. Advances in Environmental and Engineering Research: Reviewer

9. Professional Memberships

- **Associations**: Membership in academic or professional organizations (e.g., IEEE, APA).

| IEEE | The Institute of Electrical and Electronics Engineers - Member ID - **99109526** |
| ACM | Association for Computing Machinery- Member ID - **2209337** |

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10. Miscellaneous

- **Skills**

Operating System	Windows Linux
Programming Language	C Python R Java
Software Library	Sklearn, Pandas NumPy Matplotlib Seaborn TensorFlow
Database	MySql Oracle DBeaver
Software Tools	Tableau MATLAB Jupyter Spyder PyTorch
Graphical Tools	Origin Pro SmartDraw
Documentation Tools	LaTeX Mendeley GoogleDocs MS-Word MS-Excel MS-PowerPoint