

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:** All degrees (PhD, MSc, BSc, etc.) with specialization, university, and year of graduation.



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

- **Certifications:** Additional certifications or diplomas related to the field.

## 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.

- **Ongoing Projects:** Current research projects with a brief description.
- **Interdisciplinary Work:** Collaboration with other departments or fields.

#### 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

- **Course Development:** Creation or redesign of any courses or curriculum.

## 5. Publications and Presentations

- **Books:** Authored or edited books.

**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:** Peer-reviewed articles with references to prominent publications.

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: <i>Applied Science</i> , MDPI. [SCIE-2.9] <a href="https://www.mdpi.com/2076-3417/14/3/1023">https://www.mdpi.com/2076-3417/14/3/1023</a>
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: <i>Advances in Bamboo Science</i> , Elsevier. <a href="https://doi.org/10.1016/j.bamboo.2024.100072">https://doi.org/10.1016/j.bamboo.2024.100072</a>
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: <i>Science of The Total Environment</i> , Elsevier. [SCIE-9.8] <a href="https://doi.org/10.1016/j.scitotenv.2024.171106">https://doi.org/10.1016/j.scitotenv.2024.171106</a>
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: <i>Industrial Crop and Products</i> , Elsevier. [SCIE-6.6] <a href="https://doi.org/10.1016/j.indcrop.2023.117210">https://doi.org/10.1016/j.indcrop.2023.117210</a>
2023	Sawarkar. A. and D. Shrimankar (2021). "Bamboo as a sustainable crop for land restoration in India: challenges and opportunities" In: <i>Environment, Development and Sustainability</i> . Springer [SCIE,IF4.9 ] <a href="https://doi.org/10.1007/s10668-023-03911-9">https://doi.org/10.1007/s10668-023-03911-9</a>
2023	N Ghodichor, D Sahu, G Borkar, A Sawarkar, " Secure Routing Protocol To Mitigate Attacks By Using Blockchain Technology In Manet" In: <i>arXiv preprint arXiv:2304.04254</i> <a href="https://doi.org/10.48550/arXiv.2304.04254">https://doi.org/10.48550/arXiv.2304.04254</a>
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: <i>Science of The Total Environment</i> , Elsevier. [SCIE-9.8] <a href="https://doi.org/10.1016/j.scitotenv.2022.160031">https://doi.org/10.1016/j.scitotenv.2022.160031</a>
2022	AR Durge, DD Shrimankar, AD Sawarkar," Heuristic Analysis of Genomic Sequence Processing Models for High Efficiency Prediction: A Statistical Perspective", In: <i>Current Genomics</i> . Springer [SCIE, IF 3.9 ] <a href="https://doi.org/10.2174/1389202923666220927105311">https://doi.org/10.2174/1389202923666220927105311</a>
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: <i>Industrial Crop and Products</i> , Elsevier. [SCIE-6.6] <a href="https://doi.org/10.1016/j.indcrop.2021.113567">https://doi.org/10.1016/j.indcrop.2021.113567</a>
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: <i>Journal of Cleaner Production</i> , Elsevier. [SCIE-11.1] <a href="https://doi.org/10.1016/j.jclepro.2021.127143">https://doi.org/10.1016/j.jclepro.2021.127143</a>
2021	Sawarkar. A. and D. Shrimankar (2021). "Traditional System Versus DNA Barcoding in Identification of Bamboo Species: A Systematic Review" In: <i>Molecular Biotechnology</i> . Springer [SCIE, IF 2.86 ] <a href="https://doi.org/10.1007/s12033-021-00337-4">https://doi.org/10.1007/s12033-021-00337-4</a>
2020	Sawarkar. A. and D. Shrimankar (2020). "Commercial clustering of sustainable bamboo species in India" In: <i>Industrial Crop and Products</i> , Elsevier [SCIE, IF 6.449] <a href="https://doi.org/10.1016/j.indcrop.2020.112693">https://doi.org/10.1016/j.indcrop.2020.112693</a>

- **Conference Papers:** Presentations at academic conferences.

- 2023 Santosh K. Sahu, **Ankush D Sawarkar**, Ajay Kumar Sahu, Akhil Anjekar, 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

## 6. Awards and Honors

- **Grants:** Research grants or funding received from organizations.
- **Awards:** Academic awards or recognitions (e.g., Best Paper, Teaching Excellence).
- **Fellowships:** Prestigious fellowships or memberships in scholarly societies.

## 7. Professional Experience

- **Administrative Roles:** Any leadership or committee roles within the institution (e.g., Dean, Chairperson).

1.

- **Industry Collaboration:** Work with industry partners or involvement in applied research.
- **Consulting Work:** Consulting experience in the field.

## 8. Supervision and Mentoring

- **PhD/Master's Supervision:** List of students supervised, especially PhD and Master's theses.

## 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

- **Languages:** Languages spoken, if relevant to international research or collaborations.
- **Skills:** Technical or specialized skills in research methods, software, or tools.

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

- **Personal Interests:** Any hobbies or interests, if desired, to add a personal touch.