Divyansh Thakur, Ph.D.

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Employment History

2018 – Till Date	Faculty in School of Computing, Indian Institute of Information Technology Una, Himachal Pradesh, India.
2016 – 2018	Research Assistant. Jaypee University of Information Technology Wakhnaghat, Shimla,
Education	
2020 – Till Date	Ph.D., in Computer Science and Engineering from Indian Institute of Infor- mation Technology Una, Himachal Pradesh, India Thesis title: Precision Agriculture using Embedded Artificial Intelligence and Deep Learn- ing.
2016 – 2018	M.Tech., in Computer Science and Engineering from Jaypee University of In- formation Technology, Himachal Pradesh, India Thesis title: Precision Agriculture using Wireless Sensor Networks.
2012 – 2016	B.Tech. , in Computer Science and Engineering from Atal Bihari Vajpayee Government Institute of Engineering and Technology Shimla, Himachal Pradesh, India .

Research Publications

Journal Articles

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D. Thakur and S. Srinivasan, "Ai-pucmdl: Artificial intelligence assisted plant counting through unmanned aerial vehicles in india's mountainous regions," *Environmental Monitoring and Assessment*, vol. 196, pp. 1–26, 2024, **(IF=3)**.

D. Thakur, "Data transmission utilizing light fidelity for integration into iot systems," *IETE Journal of Research*, pp. 1–9, 2023, **(IF=1.8)**.

D. Thakur, J. K. Saini, and S. Srinivasan, "Deepthink iot: The strength of deep learning in internet of things," *Artificial Intelligence Review*, pp. 1–68, 2023, **(IF=12)**.

D. Thakur, Y. Kumar, A. Kumar, and P. K. Singh, "Applicability of wireless sensor networks in precision agriculture: A review," *Wireless Personal Communications*, vol. 107, pp. 471–512, 2019, (IF=2.2).

D. Thakur, Y. Kumar, A. Kumar, P. Kumar, and V. Singh, "Real time monitoring of valeriana jatamansi plant for growth analysis," *Procedia computer science*, vol. 132, pp. 507–517, 2018.

Conference Proceedings

D. Thakur, J. K. Saini, and S. Srinivasan, "Fine tuned single shot detector for finding disease patches in leaves," in *International Conference on Agriculture-Centric Computation*, Springer, 2023, pp. 1–14.

D. Thakur, Y. Kumar, P. K. Singh, and A. Juneja, "Measuring environmental parameters and irrigation for rose crops using cost effective wsns model," in *2022 3rd International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT)*, IEEE, 2022, pp. 1–6.

J. Kapoor and **D. Thakur**, "Analysis of symmetric and asymmetric key algorithms," in *ICT Analysis and Applications*, Springer, 2022, pp. 133–143.

P. Pandey, **D. Thakur**, and B. Thakur, "Techniques for behavior lie detection with the aid of physiological signals: A review," in *Proceedings of the International Conference on Advances in Electronics, Electrical & Computational Intelligence (ICAEEC)*, 2019.

Books and Chapters

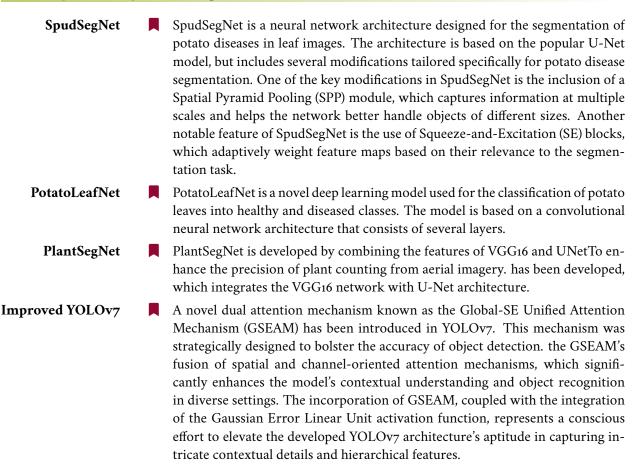
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D. Thakur and J. K. Saini, "The significance of iot and deep learning in activity recognition," in *IoT, Big Data and AI for Improving Quality of Everyday Life: Present and Future Challenges: IOT, Data Science and Artificial Intelligence Technologies*, Springer, 2023, pp. 311–329.

Skills

Languages	Strong reading, writing and speaking competencies for English, Hindi.
Coding	Python, C, C++, PHP
Deep Learning	Keras, PyTorch, TensorFlow
Machine Learning	Linear algebra, Calculus, TensorFlow, Probability and statistics
Databases	Mysql.
Web Dev	НтмL, css, JavaScript, Apache Web Server.

Developed Deep Learning Models



Developed Deep Learning Models (continued)

GlaciNet "GlaciNet: Enhanced Glacier Detection using Modified U-Net" is an innovative deep learning model tailored for the accurate identification of glaciers within satellite imagery. Leveraging a modified U-Net architecture, GlaciNet excels in discerning the complex and dynamic features of glaciers from these images, providing vital insights for climate research and environmental monitoring. Its adaptability and precision make it a valuable tool for scientists and researchers dedicated to understanding the impact of glacial changes on our planet's ecosystems and climate patterns.

Developed Embedded Artificial Intelligence Prototypes

FruitVision	A hardware prototype has been created, utilizing the capabilities of the Nvidia Jetson Nano and Depth AI camera, to integrate a custom deep learning model for real-time object counting through edge computing.
Self-Configured AI-based UAV	A self-configured UAV integrated with Deep Learning Model has been developed from scratch for detecting objects in real-time dur- ing its flight. This innovation has been officially submitted for an In- dian Patent.

Miscellaneous Experience

Awards and Achievements

2012		AIEEE, Qualified All India Engineering Entrance Examination.
2016		GATE, Qualified Graduate Aptitude Test in Engineering.
2018		UGC-Net , Qualified University Grants Commission National Eligibility Test for Assistant Pro- fessor.
2023		VLDB Grant , A Grant of USD3000 has been granted from VLDB23, A* Conference of Computer Science and Engineering.
Certification		

ertification

2020	Computer Vision Basics University at Buffalo, The State University of New York
2021	Programming for Everybody (Getting Started with Python) University of Michigan

References

Dr. K. Sivan, Ex Chairman, Indian Space Research Organisation

Prof. Lalit. K. Awasthi, Director, National Institute of Technology Uttarakhand