Aswin Giri Jawahar

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Employment History

Jun – Dec 2024 **Post-Doctoral Equivalent Fellow,** Indian Institute of Technology Madras.

2021 – present **CEO and Co-founder,** SENSurAir Private Limited.
SENSurAir Private Limited is a start-up aimed at developing affordable air quality monitoring solutions. In my role as CEO, I managed grants and engaged with stakeholders, successfully commercializing two products.

Education

2020 – 2024 **Ph.D., Indian Institute of Technology Madras**.
Thesis title: *Air pollution hotspot management using image processing and machine learning techniques.*

Jun–Aug 2023 **Research Exchange, Hokkaido University, Japan**.
Project title: *Exposure assessment and modelling of Phosphate Flame Retardants in accumulated house dust and its association with allergy.*

2017 – 2019 **M.E. Environmental Engineering, College of Engineering, Guindy.** CGPA-8.51/10.
Thesis title: *Effect of ambient Carbon monoxide levels on in-vehicle concentration at traffic intersections.*

2012 – 2016 **B.E. Civil Engineering, Bannari Amman Institute of Technology.** CGPA-8.21/10.
Thesis title: *Optimization of Reinforced Concrete elements by traditional method.*

Research Publications

Journal Articles

1. **J. Aswin Giri** and S. M. Shiva Nagendra, "Air pollution perception for air quality management: A systematic review exploring research themes and future perspectives," *Environmental Research Letters*, 2024. DOI: 10.1088/1748-9326/ad3bd0.
2. **J. Aswin Giri** and S. M. Shiva Nagendra, "Spatio-temporal exposure assessment of particulate matter pollution in auto-rickshaw drivers in Chennai, India," *Atmospheric Pollution Research*, vol. 14, no. 12, p. 101 933, Dec. 2023, ISSN: 13091042. DOI: 10.1016/j.apr.2023.101933.
3. **J. Aswin Giri**, B. Schäfer, R. Verma, *et al.*, "Lockdown Effects on Air Quality in Megacities During the First and Second Waves of COVID-19 Pandemic," *Journal of The Institution of Engineers (India): Series A*, Nov. 2022, ISSN: 2250-2149. DOI: 10.1007/s40030-022-00702-9.
4. **J. Aswin Giri**, S. Karthikeyan, and M. Gokul Raj, "Effect of ambient concentration of Carbon monoxide (CO) on the in-vehicle concentration of Carbon monoxide in Chennai, India," *Environmental Engineering Research*, vol. 26, no. 3, pp. 0–1, Jun. 2020, ISSN: 1226-1025. DOI: 10.4491/eer.2020.165.

Conference Presentations

1. **J. Aswin Giri** and S. M. Shiva Nagendra, "Images for air quality sensing and classification: How effective are they?" In *Air Sensors International Conference (ASIC), California, USA*, 2024.
2. S. M. Shiva Nagendra and **J. Aswin Giri**, "Smart sensors for community air quality management.," in *Air Sensors International Conference (ASIC), California, USA*, 2024.

3. **J. Aswin Giri** and S. M. Shiva Nagendra, "Evaluation of low-cost particulate matter sensor in indoor and outdoor micro-environments," in *2023 IEEE Applied Sensing Conference (APSCON)*, IEEE, Jan. 2023, pp. 1–3. DOI: 10.1109/APSCON56343.2023.10100969.
4. **J. Aswin Giri** and S. M. Shiva Nagendra, "Perception-based population segmentation for effective air quality information dissemination," in *HEAL 2023 - Collective Action for Health, Environment and Climate*, HEAL Network, Sep. 2023.
5. **J. Aswin Giri** and S. M. Shiva Nagendra, "Evaluation of low-cost sensor network for urban air pollution management," in *2022, Joint Indo-Japanese Smart City Conference*, 2022.
6. **J. Aswin Giri** and S. M. Shiva Nagendra, "Machine learning techniques in air quality forecasting," in *CEPHA 2022 International Symposium, Bangkok, Thailand*, 2022.
7. **J. Aswin Giri** and S. M. Shiva Nagendra, "Influence of mobility data on urban air pollution," in *6th Indian International Conference on Air Quality Management (IICAQM-2021), Chennai, India*, 2021.

Skills

Languages	Strong reading, writing and speaking competencies in English and Tamil. Basic speaking competency in Japanese and Telugu.
Coding	Python, R and MATLAB.
Skills	Data analysis, Machine learning, GIS, AERMOD and CALINE.
Misc.	Academic research, teaching, training and entrepreneurship.

Miscellaneous Experience

Awards and Achievements

2024	**Research Excellence Award**, IIT Madras.
	Post-Doctoral Equivalent Research Fellowship, IIT Madras.
	IITM International Travel Grant, IIT Madras.
2023	**JASSO scholarship**, Japan.
2020-24	**Half Time Research Assistantship**, Ministry of Human Resources and Development.
2019	**Eligibility for Assistant Professorship**, University Grants Commission, India.
2018	**Internship Trainee**, at Larsen and Toubro, June 2018.
2017-19	**Half Time Teaching Assistantship**, Ministry of Human Resources and Development.
2016	**BIT Achiever Award**, awarded during the undergraduate programme.

Invited Talks

2024	**Winter school lecture** on "Leveraging R for Air Quality Management" in the 9th IICAQM.

Memberships and associations

AWMA	**Air and Waste Management Association (AWMA)**, member since 2024.
IICAQM	**Indian International Conference on Air Quality Management**, a member of the organising committee of the annual conference at IIT Madras, since 2020.
	Joint Student Secretary, 2024 and 2023.
	Organising committee member, 2022, 2021 and 2020.

References

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