DR. ACHAL AGRAWAL

**Assistant Professor (Selection Grade) - Computer Science**

[**achal.agrawal@ddn.upes.ac.in**](mailto:achal.agrawal@ddn.upes.ac.in) **+91 98 98 04 99 02 Dehradun, India** Age **35 years** [Google Scholar](https://scholar.google.com/citations?user=GK0qsVIAAAAJ&hl=en&oi=ao) [Linkedin](https://www.linkedin.com/in/achal-agrawal-phd-42331855/)

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# EXPERIENCE

## Assistant Professor - Selection Grade

### [UPES](https://www.upes.ac.in/)

 Jan 2022 – Present Dehradun, India

[**Founder of Roadz**](http://roadz.in/)- An app to automatically detect potholes and warn future users of impending dangers.

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## Data Scientist for Social Good

### [CropIn](https://www.cropin.com/)

 Jan 2021 – Dec 2021 Bengaluru, India

* Remote Sensing Applications for Agriculture
* Wheat Detection in Nigeria for Flour Mills Association, Nigeria
* Rice Detection in Punjab for Punjab Agricultural Export Corporation

## Founder

### [DataWhiz](https://www.datawhiz.org/)

 June 2020 – Dec 2020 Hyderabad, India

Conducted Data Science Bootcamp Remotely (Rated 4.5/5 by participants)

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## Assistant Professor - Computer Science

### [Mahindra University](https://www.mahindraecolecentrale.edu.in/)

 July 2018 – June 2020 Hyderabad, India

[**Co-Founder of CovIndia**](https://economictimes.indiatimes.com/tech/internet/corona-crunchers-how-covid-19-dashboards-helping-people-make-sense-of-the-pandemic/articleshow/75509406.cms)- India’s first district-wise tracker for Covid-19. Over a million visits in first two weeks. Data sought by World Bank, IMD and researchers from IISc, Yale-NUS, IITs.

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* Main Instructor : Big Data, Game Theory, Data Science, Python

Lab Instructor : Machine Learning, Deep Learning, Data Structures, Introduction to Computer Science in C

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* Organiser - Front-End Workshop, Smart India Hackathon Selections

## Data Scientist

### [RATP - Paris Transport Authority](https://www.ratp.fr/)

 Mar 2017 – June 2018 Paris, France

* Real Time Predictive Maintenance of suburban metro trains,

Estimation of passenger load in the bus network based on noisy data. (Cleaning of data, Visualization of data)

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# EDUCATION

PhD - *Information and Communication Technology and Sciences*

### [University of Paris Saclay](https://www.shanghairanking.com/institution/paris-saclay-university)

 July 2016 Orsay, France

[Master - *Network Industries and Digital Econonomy*](https://masteriren.eu/)

### [Ecole Polytechnique](https://en.wikipedia.org/wiki/Ecole_Polytechnique)

 October 2012 Palaiseau, France

Engineer - *Most prestigious Engineering program in France*

### [Ecole Polytechnique](https://en.wikipedia.org/wiki/Ecole_Polytechnique)

 October 2011 Palaiseau, France

B.Sc. (Hons) - *Physics*

### [Chennai Mathematical Institute](https://www.cmi.ac.in/)

 August 2008 Chennai, India

# SKILLS

* **Programming**: Python, JavaScript, C, R
* **Data Analysis**: pandas, sklearn, tensorhow, keras.
* **Data Visualisation**: matplotlib, plotly, bokeh
* **Backend**: hask, nodeJS (express)
* **Frontend**: react, bootstrap, css, html
* **DB**: mongoDB, elasticsearch, mySQL
* **DevOps**: AWS, docker, git, virtualbox
* **Remote Sensing**: QGIS, Google Earth Engine

# AWARDS

**Smart India Hackathon** (2019) - Mentor of the winning team (complex category) - Problem statement provided by Aurobindo Pharmaceuticals.

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**Eiffel Scholarship** (2009 - 2012) - Prestigious scholarships given by the Ministry of External Affairs (France) for higher studies in France.

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**SIA-NOL Scholarship** (2003 - 2005) - Given to a selected few Indian students for Junior College studies in Singapore (2 years).

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**Bronze Medal** (2005) in Singapore National Physics Olympiad. Honourable Mention in Singapore National Mathematics Olympiad.

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**NTSE Scholarship** (2003) - Given to top 1000 indian students of Class 10 every year

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# SELECT PUBLICATIONS

### Journal

C. Zhang, S. Lasaulce, **A. Agrawal**, and R. Visoz, ‘Distributed Power Control with Partial Channel State Information: Performance Characterization and Design’, **Transactions on Vehicular Technology** Vol. 68, no. 9, pp. 8982-8994, Sept. 2019

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### Conference

B. Perabathini, K. Tummuri, **A. Agrawal**, and V. Varma, ‘E cient 3D placement of UAVs with QoS assurance in ad hoc wireless networks’, The 28th International Conference on Computer Communications and Networks (ICCCN 2019) , Valencia, Spain, July 29 - August 1, 2019

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**A. Agrawal**, S. Maddila, C. Zhang,B. Perabathini, and

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S. Lasaulce, ’Cooperative Energy E cient Resource Allocation in Fast Fading Interference Networks’, International Conference on Wireless and Mobile Computing, Networking and Communications, (WiMob 2019), Barcelona, Spain, October 21-23, 2019

**A. Agrawal**, F. Danard, B. Larrousse, S. Lasaulce, ‘Implicit coordination in two-agent team problems with continuous action sets. Application to the Witsenhausen cost function’, European Control Conference (ECC 2015) , Linz, Austria, July 15 - July 17, 2015

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O. Beaude, **A. Agrawal**, S. Lasaulce, ‘A framework for computing power consumption scheduling functions under uncertainty’, IEEE International Conference on Smart Grid Communications 2015 , Miami, USA, Nov 2 - Nov 5, 2015

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C. Zhang, **A. Agrawal**, V.S. Varma, S. Lasaulce, ’Thresholding-based distributed power control for energy-e cient interference networks.’ IEEE 29th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna, Italy Sep 9 2018

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