

# Curriculum Vitae

## SUVRANKAR DATTA

**Senior Resident (Radiodiagnosis and Interventional Radiology) -**  
AIIMS Delhi, India

**M.D. (Radiology) -** AIIMS Delhi, India

**M.B.B.S. (Gold Medallist) -** JIPMER, Puducherry, India

**President -** Federation of All India Medical Associations (FAIMA)

**Vice President -** Resident Doctors Association (RDA), AIIMS Delhi

**Vice President -** NAFORD (AIIMS and INIs)



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## Education

### ❖ M.D. (Master of Medicine) - Radiology

**Department of Radiodiagnosis and Interventional Radiology**

*All Indian Institute of Medical Sciences (AIIMS), New Delhi*

*Ansari Nagar, New Delhi 110049, India*

*2020 - 2023*

### ❖ C.R.R.I. (Compulsory Rotatory Residential Internship) Intern

*Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER),*

*Dhanvantri Nagar, Puducherry 605006, India*

*2018-2019*

### ❖ M.B.B.S (Bachelor of Medicine, Bachelor of Surgery)

*Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER),*

*Dhanvantri Nagar, Puducherry 605006, India*

*2014-2018*

### ❖ Senior School Certificate Examination

*South Point High School,*

*82/7 A Ballygunge Place, Ballygunge, Kolkata, West Bengal 700019*

*2012-2014*

### ❖ Secondary Examination

*South Point High School,*

*82/7 A Ballygunge Place, Ballygunge, Kolkata, West Bengal 700019*

*2007-2012*

### ❖ Elementary School

*South Point School,*

*16 Mandeville Gardens, Kolkata, West Bengal 700019, India*

*2002-2007*

# Relevant Publications, Presentations and Chapters (Completed)

## 1. Evaluating ChatGPT-4's Performance in Identifying Radiological Anatomy in FRCR Part 1 Examination Questions

**Published:** Sarangi PK, **Datta S**, Panda BB, Panda S, Mondal H. Evaluating ChatGPT-4's Performance in Identifying Radiological Anatomy in FRCR Part 1 Examination Questions. *Indian Journal of Radiology and Imaging*. 2024 Nov (e-First)

**Access at:** <https://doi.org/10.1055/s-0044-1792040>

## 2. Radiologic Decision-Making for Imaging in Pulmonary Embolism: Accuracy and Reliability of Large Language Models—Bing, Claude, ChatGPT, and Perplexity.

**Published:** Sarangi PK, **Datta S**, Swarup MS, Panda S, Nayak DS, Malik A, Datta A, Mondal H. Radiologic Decision-Making for Imaging in Pulmonary Embolism: Accuracy and Reliability of Large Language Models—Bing, Claude, ChatGPT, and Perplexity. *Indian Journal of Radiology and Imaging*. 2024 Oct;34(04):653-60.

**Access at:** <https://doi.org/10.1055/s-0044-1787974>

## 3. Comment on: ChatGPT: Chasing the Storm in Radiology Training and Education. Indian Journal of Radiology and Imaging.

**Published:** Sarangi PK, **Datta S**, Mondal H. Comment on: ChatGPT: Chasing the Storm in Radiology Training and Education. *Indian Journal of Radiology and Imaging*. 2024 May 3.

**Access at:** <https://doi.org/10.1055/s-0044-1786722>

## 4. AIRib Framework: Development of an End-to-End Pipeline for the Automated Detection, Characterisation, Prognostication and Reporting of Traumatic Rib Fractures from CT Scans

**S. Datta**, A. Farooq, S. Agrawal, D. Mishra, A. Kumar, S. R. Gamanagatti et al.

**Oral Presentation:** 109th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA) 2023; November 2023. Chicago, Illinois, USA

Awarded with the prestigious and India's only RSNA Trainee Research Prize 2023 ([Access here: https://pubs.rsna.org/doi/10.1148/radiol.249005](https://pubs.rsna.org/doi/10.1148/radiol.249005)); Second Prize in Annual AIIMS Research Day 2023 and featured in Auntminnie.com in its AI Showcase 2023.

## 5. An Attention Learning-Enabled 3D Conditional Generative Adversarial Network for Lung Nodule Segmentation

**Published:** Dabass, M., Chandalia, A., Datta, S., Mahapatra, D. (2024). An Attention Learning-Enabled 3D Conditional Generative Adversarial Network for Lung Nodule Segmentation. In: Uddin, M.S., Bansal, J.C. (eds) *Proceedings of International Joint Conference on Advances in Computational Intelligence. IJCAI 2022. Algorithms for Intelligent Systems*. Springer, Singapore.

**Access at:** [https://doi.org/10.1007/978-981-97-0180-3\\_24](https://doi.org/10.1007/978-981-97-0180-3_24)

# Relevant Publications, Presentations and Chapters (Completed)

## 6. ALE-GAN: A 3D Conditional Generative Adversarial Network with Attention Learning Modules for Lung Nodule Segmentation

**Published:** Dabass M, Chandalia A, Datta S, Mahapatra D. *ALE-GAN: a 3D conditional generative adversarial network with attention learning modules for lung nodule segmentation*. In: Das S, Saha S, Coello CAC, Rathore H, Bansal JC, editors. *Advances in Data-Driven Computing and Intelligent Systems. ADCIS 2023. Lecture Notes in Networks and Systems*, vol 890. Springer, Singapore; 2024.

**Access here:** [https://doi.org/10.1007/978-981-99-9531-8\\_26](https://doi.org/10.1007/978-981-99-9531-8_26)

## 7. Attention and Residual-Atrous Convolutional Learning-Based CNN Architecture for Lung Nodule Segmentation and Classification

**Published:** Dabass M, Chandalia A, Senasi R, Datta S. *Attention and residual-atrous convolutional learning-based CNN architecture for lung nodule segmentation and classification*. In: Das S, Saha S, Coello CAC, Bansal JC, editors. *Advances in Data-Driven Computing and Intelligent Systems. ADCIS 2023. Lecture Notes in Networks and Systems*, vol 893. Springer, Singapore; 2024.

**Access here:** [https://doi.org/10.1007/978-981-99-9518-9\\_8](https://doi.org/10.1007/978-981-99-9518-9_8).

## 8. Optimising Large Language Model (LLM) augmented Speech Recognition for Reporting in Radiology: Achieving Near-Zero Error Rates through advanced Prompt Engineering

S. Datta, A. Mulla, M. Dabass, M. Jabeer, A. Chandalia, P. Kadapa, et al.

**Cutting Edge Presentation (Oral):** RSNA 2023; Chicago, Illinois, USA

## 9. A comparative analysis of Speech Recognition Pipelines augmented by Large Language Models (LLMs) for Radiology Reporting: A 2023 Update

S. Datta, A. Mulla, G. Boparai, V. M V, S. Dharmula, R. Nagaya, O. Chaudhuri, et al.

**Cutting Edge Presentation (Oral):** RSNA 2023; Chicago, Illinois, USA

## 10. Artificial Intelligence in Interventional Radiology: A Primer for Residents

S. Datta, K. Rangarajan, M. Dabass, A. Chandalia

**Educational Exhibit (Digital Poster):** 109th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA) 2023; Nov 2023. Chicago, Illinois, USA

## 11. Artificial Intelligence in Musculoskeletal Interventions: Challenges, utilities and its future

Chandrashekhara SH, Datta S

**Digital Poster:** International Skeletal Society (ISS) 2023 Annual Meeting; London, UK

# Relevant Publications, Presentations and Chapters (Completed)

## 12. Artificial Intelligence in Interventional Oncology: Challenges, opportunities and the way ahead

*Suvrankar Datta, Dr. S H Chandrashekhara, Dr. Shivanand Gamanagatti*

**Oral Presentation:** 23<sup>rd</sup> Annual Conference of the Indian Society for Vascular and Interventional Radiology (ISVIR 2023); March 2023. Hyderabad, India.

## 13. Artificial Intelligence in Interventional Radiology (Chapter)

**Published:** Datta, S. (2021). *AIM in Interventional Radiology*. In: Lidströmer, N., Ashrafian, H. (eds) *Artificial Intelligence in Medicine*. Springer Nature, Cham.

**Access at:** [https://doi.org/10.1007/978-3-030-58080-3\\_283-1](https://doi.org/10.1007/978-3-030-58080-3_283-1)

## 14. Evaluation of factors influencing Mycobacterium tuberculosis complex recovery and contamination rates in MGIT 960

**A part of the Indo-US TB Project (Sites: Puducherry, INDIA; Boston, US; Newark, US):** Kalaiarasan Ellappan, Suvrankar Datta, M Muthuraj, Subitha L, Jane A. Pleskunas, Charles Robert Horsburgh Jr, Padmini Salgame, Natasha Hochberg, Sonali Sarkar, Jerrold J. Ellner, Gautam Roy, Maria Jose, Saka Vinod Kumar and Noyal Mariya Joseph

**Published:** Ellappan K, Datta S, Muthuraj M, Lakshminarayanan S, Pleskunas JA, et al. Evaluation of factors influencing Mycobacterium tuberculosis complex recovery and contamination rates in MGIT960. *Indian J Tuberc*. 2020 Oct;67(4):466-471.

**Access at:** <https://doi.org/10.1016/j.ijtb.2020.07.016>

## 15. Establishment of Normative Data for Arterial Stiffness Indices (ASIs) in a healthy South Indian Population

**Part of Indian Council of Medical Research (ICMR) Short Term Studentship Award**

*Suvrankar Datta, Sandhiya S, Saras Singh, Sai Sriram Katada, Akila Srinivasan, Sapan Kumar Behera, Saibal Das*

**Poster Presentation:** East Asia Regional Conference of International Biometric Society; February 2018. JIPMER, Puducherry, India

## 16. Comparison of vascular function in newly diagnosed hypothyroid patients and healthy volunteers

*Behera SK, Datta S, Selvarajan S, Kamalanathan S, Ramasamy R*

**Poster Presentation:** Evidence Based Medicine & Clinical Research Conference (EBCCON 2018); March 2018. Chennai, India

# Research Experience in Interdisciplinary AI Teams

## ❖ Lead AI Researcher and Team Lead

*Project for evaluating ensemble of LLMs and Open Source Software for Speech Recognition*  
*Independent Academia – Industry Collaboration*

*August 2023 – Present*

- Leading an independent **national multidisciplinary academia-industry** team
- Conceptualised and coordinated a fast-paced project to create an **Ensemble Speech-to-text NLP algorithms with LLM pipeline** for **radiology reporting** and **compared various Large Language Models** to find the best performing open source LLMs and pipeline
- Explored **Prompt Engineering** to demonstrate **sequential improvement in performance metrics across all LLMs** with standardised prompt modifications
- Both submitted abstracts (out of the total three accepted abstracts selected from India)** presented in **RSNA 2023** as two of their Cutting-Edge Oral Presentations

## ❖ Clinical Researcher and Lab Member

*Rajpurkar Lab*

*Harvard Medical School, USA*

*Part of the prestigious Medical AI Bootcamp*

*2024 – Present*

- Involved in various **clinical user studies** of the lab to **clinically evaluate and validate the cutting-edge AI algorithms** being developed in the United States
- Collaborated with global clinicians and talented computer scientists from **Stanford University** and **Harvard University**
- Developing **standards, benchmarks and evaluation metrics** in radiology reporting

## ❖ Team Lead and Clinical Lead

*Project for Development of India Specific ML Models using Chest CT scans for Prognostication*

*Part of M.D. Thesis*

*IIT Jodhpur – AIIMS Delhi*

*2022 – 2023*

- Evaluated and developed novel ML models for detecting Rib Fractures using AI**
- Project has Secured Govt. Grant of INR 39 Lakhs** for converting into a complete Pipeline
- Received the **RSNA Trainee Research Award 2023**, the **only research work from India** to receive the Prize & the **first work in AI Model from Indian academia** to receive this award

## ❖ Team Coordinator

*Multiple Biodesign Projects*

*JIPMER*

*2018 – 2020*

- Conceptualised an **Affordable and Rapid Non-invasive Arterial Stiffness estimator** utilising an Artificial Intelligence algorithm for waveform analysis
- Formed and led a multidisciplinary team of 7 Students from **JIPMER Puducherry, IIT Madras** and **MVIT Puducherry** under faculty advisors from IIT Madras and JIPMER Puducherry
- Finalist** in the “**DST-Lockheed Martin-Tata Trusts India Innovation Growth Programme (IIGP) 2.0** - University Challenge 2018” – **Selected among Top 40 Innovations of India**

# Major Achievements and Contributions

- Invited as a **Panellist** and **Special Invitee** to multiple Industry and Policy roundtables of the industry by bodies like NASSCOM and FICCI, including **Healthtech Roundtable at NASSCOM Future Forge, Bangalore, in October 2024** and **FICCI Heal, New Delhi in November 2024**.
- Delivered **keynotes** at conferences organised by the Academia and Industry across India on **Artificial Intelligence, Large Language Models** and **Multimodal AI in Healthcare** including **ITTMC and Sion Hospital** in September 2024, **NASSCOM Community Meetup** in November 2023, **Bhartiya Vidyapeeth Medical College and Hospital, Pune, Maharashtra, India** in October 2023 and **AI Webinar by Clinicas Essex Research Wing** in September 2023.
- Upcoming invitations as a **Guest Panellist at IIIT Delhi** and **Guest Speaker at Vishwakarma Institute of Technology, Pune** in **November 2024**.
- Invited as a **Guest speaker** to deliver a talk on **India's Digital Healthcare transformation** at **GAPIO 2023** in **Ahmedabad, Gujarat, India** in 2023 and as a **Guest Panellist** for the prestigious **IIT Jodhpur Industry Day 2021**.
- Received multiple awards including the **GAIMS Global Healthcare Achievers' Award** at **New Delhi, India** in 2022 for **Exceptional Leadership** in the field of Medicine and Healthcare and the **Young Achiever in Radiology 2024** at the **National Diagnostic Summit, Mumbai** in **2024**.
- **Invited** to deliver a keynote on **Healthcare Research and Innovation** at **JAANA CME, Los Angeles, CA, USA** on October 5, 2019.
- **Selected** among the **Top 40 International Applicants** to attend the prestigious **Accelerated Healthcare Leadership Programme** organised by Voice of Healthcare in 2019.
- Invited as a **Guest Speaker** at **MedXQuest 2022** to deliver a talk on **Healthcare Innovation**.
- Received the most prestigious national awards for young doctors viz. **IMA MSN Chairman's National Award** for Leadership, **Delhi Doctors' Forum "Young Doctor of the Year 2021" Award**, the **Atal Bihari Vajpayee Memorial Award for Distinguished Leadership** at **FAIMACON 2022**.
- **Invited** as a **Speaker** to deliver keynotes at multiple regional and national IMA events including **New Delhi** in **2019** and **NATCON 2021** in **Patna, Bihar** to help in **framing policies of the IMA**.
- **Invited** as a representative to **all major round table meetings of the IMA** with Resident Doctors Associations and Junior Doctor Associations for **common agenda and policy** preparation.
- **Secured AIR (All India Rank) 9 in AIIMS, AIR 10 in JIPMER and Rank 13 in PGIMER** in Post-Graduate Entrance Examinations 2020.
- **Nominated** by **Director, JIPMER** to be a **Keynote Speaker** in "**Connaissance 2018 - Second International Undergraduate Medical Students Conference**", **JIPMER, Puducherry, India**.
- Organised and started the annual flagship event of JIPMER – "**Connaissance 2017, the First International Undergraduate Medical Students Conference**", **JIPMER Puducherry, India** which became **India's largest International Undergraduate Medical Conference** with 3000+ delegates from 17+ States.



## Organizational Roles (Leadership & Advisory)

- ❖ **Vice President** (2024 – Present)
- ❖ **Coordination Secretary** (2023-2024)
  - ❖ *Resident Doctors' Association (RDA) – AIIMS Delhi*
  - ❖ *The Representative Association of Resident Doctors of AIIMS Delhi*
- ❖ **President** (2024- Present)
- ❖ **Vice-President** (2023 – 2024)
- ❖ **General Secretary** (2020 – 2022)
  - ❖ *Federation of All India Medical Association (FAIMA)*
  - ❖ *Largest National Association of all Resident Doctors Associations of India*
- ❖ **National Director of Entrepreneurship** (2021 – Present)
  - ❖ *World Youth Heart Federation – India*
- ❖ **Policy Contributor** (2019 – 2020)
  - ❖ *Small Working Group (SWG) for IFMSA Policy on Technological Innovation in Healthcare*
  - ❖ *International Federation of Medical Students' Association (IFMSA)*
- ❖ **State Coordinator** (2018 – 2019)
  - ❖ *Indian Medical Association - Students' Wing (IMA SW)*
  - ❖ *Tamil Nadu & Puducherry*
- ❖ **Organising Secretary and Founding Executive** (2016-2017)
  - ❖ *International Conference (Connaissance) Organising Board*
  - ❖ *Division of Research (JIPMER)*
- ❖ **National Chair of Strategy** (2019-20)
- ❖ **National Council Member** (2018-19)
  - ❖ *Indian Medical Association – Medical Students' Network (New Delhi)*
- ❖ **Joint Secretary** (2016)
  - ❖ *JIPMER Student's Association (the Students' Council of JIPMER)*
- ❖ **Advisory Board Member** (2022 – Present)
  - ❖ *Indian Medical Association – Medical Students' Network (New Delhi)*

## Volunteer & Social Activities

- ❖ **Vice President** (2019 – Present)
  - ❖ *M.L. Sarkar Memorial School, Kolkata, INDIA*
  - ❖ Provide free high quality education for students from the economically challenged sections of the society in **West Bengal, India**
- ❖ **Volunteer** (2016)
  - ❖ *Ed for All – Pondicherry*
  - ❖ Taught English and moral sciences to *underprivileged school children* in Pondicherry