Amartya Basu

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Education

2025– **PhD in Computer Science**, *SUNY Stony Brook*, New York, USA.
Advisor: Dr. Shubham Jain

2022–25 **MS in Computer Science & Engineering**, *IIT Madras*, Chennai, India.
Thesis: Mapping Pervasive Environments using Radio Tomography and Neural Radiance Field.
Advisor: Dr. Ayon Chakraborty

2016–20 **B.Tech in Computer Science & Engineering**, *Government College of Engineering and Leather Technology*, Kolkata, India.

Awards and Achievements

- Student Travel Grant Award to attend HotMobile 2026.
- Research Excellence Award, IIT Madras.
- Pre-Incubation funding from NIRMANN, IIT Madras (Jul-Nov'24 cohort).
- Institute Research (IR) Award, IIT Madras **(sole recipient in MS category, Jul-Nov'24)**.
- Travel Grant Award for IITB CSE Research Symposium 2023.
- Travel Grant Award for ACM SIGMETRICS/ PERFORMANCE 2022.
- Secured 98.58 percentile out of $\approx$ 1 lakh candidates in GATE (CS) 2020.

Experience

2025– **Research Assistant**, *Stony Brook University*, NY, USA.
Pervasive Computing and Smart Sensing (PiCASSo) Lab, Department of Computer Science.

2022-24 **Research Assistant**, *IIT Madras*, Chennai, India.
SeNSE Lab, Department of Computer Science & Engineering.

2020-21 **Assistant System Engineer**, *Tata Consultancy Services*, Kolkata, India.

Summer 2019 **Web Development Intern**, *ITC Infotech*, Kolkata, India.

Publications

- Tanmay Srivastava, **Amartya Basu**, Shubham Jain. *Beyond-Voice: Leveraging Articulatory Motion for Next-Gen AI Assistants*. 27th International Workshop on Mobile Computing Systems and Applications (HotMobile 2026).
- **Amartya Basu**, Ayon Chakraborty. *SpecNeRF: Neural Radiance Field Driven Wireless Coverage Mapping for 5G Networks*. AIoT Workshop, ACM MobiHoc 2024.
- **Amartya Basu**, Ayon Chakraborty, Kush Jajal. *Ubiquitous Indoor Mapping using Mobile Radio Tomography*. IEEE Transactions on Mobile Computing, Vol. 23, No. 12, 2024.

Patents

1. **A System and Method for Mapping Indoor Spaces in Real-time**.
   Ayon Chakraborty and Amartya Basu. Granted- 567451 (India).

Press Coverage

- **Ubiquitous Indoor Mapping using Mobile Radio Tomography:**
  Times of India, Hindustan Times, The Hindu, India Today.

Professional Services

- **Journal Reviewer**

  - IEEE Transactions on Visualization and Computer Graphics- 2026, 2025.
  - IEEE Transactions on Mobile Computing- 2026, 2025, 2024.
  - Ad-Hoc Networks (Elsevier)- 2025, 2024.

- **Artifact Evaluation Committee**

  - ACM International Conference on emerging Networking Experiments and Technologies (CoNEXT 2025).
  - ACM International Conference on Mobile Systems, Applications, and Services (MobiSys 2025).
  - ACM Conference on Embedded Networked Sensor Systems (SenSys 2024).

- **Conference Activities**

  - Web chair of SOCIETY workshop in con-junction with ICDCN'25, IIT Hyderabad, India.
  - Volunteer for the ICDCN'24 conference, IIT Madras, India.

- **Institute Activities**

  - Organizer of CSE Bits monthly event in the Department of CSE, IIT Madras- 2023.
  - Subject matter expert for GATE CS NPTEL- 2022.
    Subjects: Operating System, Computer Networks, Computer Organization and Architecture.

Teaching Assistantships

Jul-Nov, 2024 **Smart Sensing for Internet of Things *(Graduate level).***
Instructor : *Dr. Ayon Chakraborty.*

Jan-May, 2024 **Advanced Data Structures and Algorithm *(Graduate level).***
Instructor : *Dr. C Pandu Rangan.*

Jul-Nov, 2022 **Foundation for Computer System Design *(Undergraduate level).***
Instructor : *Dr. Ayon Chakraborty.*