

# Arunima Sen (she/her)

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## EDUCATION

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### Paris-Lodron University Salzburg and University of Southern Brittany

Austria and France

*Erasmus Mundus Joint Master - Copernicus Master in Digital Earth*

*Sep 2024 - June 2026*

Double degree Master of Science (MSc) in Earth Observation and Geoinformatics with a specialization in Geo Data Science and Artificial Intelligence. Recipient of a prestigious fully-funded **Erasmus+ Scholarship** from the European Commission

### Ashoka University

India

*Bachelor of Science and Postgraduate Diploma in Advanced Studies and Research*

*Aug 2020 - May 2024*

**Advanced Major** in Computer Science, **Minor** in Physics, **Concentration** in Environmental Studies (*Graduated Cum Laude*)

**Thesis:** Detecting Plastic Debris from Remote Sensing and Satellite Imagery Using Pansharpening Convolutional Neural Networks and Spectral Mixture Analysis

College Board India Scholar and Ashoka Merit Scholar on full scholarship for 4 years. Teaching Assistant for “The New Geography of the Information Age” (Spring 23) and Computer Organization and Systems (Fall 23) courses with a 4.2/5 score

## SKILLS

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**Technical:** Python, R (basic), Machine Learning Frameworks in Python, QGIS, eCognition, Remote Sensing and GIS, Geospatial Data Analysis and Visualization, Spatial Databases (PostgreSQL and such)

**Personal:** Climate Justice Advocacy, Community Organization and Leadership, Interdisciplinary Collaboration, Public Speaking, Research and Policy Analysis, Scientific Writing and Communication, Workshop Facilitation

## EXPERIENCE

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### Austrian Institute of Technology (AIT); Centre for Digital Safety and Security

Vienna, Austria

*Intern in “Digital Solutions for Climate Resilience and Smart Communities”*

*Jul 2025 - Aug 2025*

- Recipient of an Austrian Research Promotion Agency Internship for Female Students in STEM. Contributed to the Horizon Europe CLIMAAX project by adapting hazard and risk assessment workflows for Bolzano, Italy, including urban heatwave exposure with future population projections and flood-related risks to buildings and population. Developed and tested flood mapping approaches using Sentinel-1 SAR data, advancing manual and semi-automated methods for generating flood extent maps. Designed transferable methods and tools to support another Horizon Europe ICARIA project in assessing flood impacts on exposed assets

### Emory University

Atlanta, GA, USA

*Summer Research Fellow*

*Jun 2022 - Aug 2022*

- Recipient of the Laney Graduate School’s Summer Opportunity in Academic Research (LGS-SOAR) Fellowship. Selected as the only international overseas student in a cohort of 34 scholars. Investigated the phenomenon of pixel locking under the Department of Physics. Completed a research project titled “Position Estimation and Subpixel Accuracy in Tracking Particles from Images” and presented at the Emory Undergraduate Research Symposium

### Earth Guardians

Remote/USA

*Member of the International Youth Council*

*Mar 2022 - Apr 2023*

- Helped with the co-creation of Earth Guardians’ programs and campaigns. Trained a coalition of youth leaders around the globe to support on-the-ground actions, ranging from land stewardship, non-violent direct action, and mutual aid to energy solutions, divestment campaigns, and more. Collaborated with youth climate networks to create actionable demands and resources for COP27

### The National Geographic Society and The Nature Conservancy

Remote/USA

*Research Extern*

*Sep 2021 - Nov 2021*

- As one of the 2 externs selected from India, learned about various marine conservation issues and approaches through resources and case studies provided by the National Geographic Society and The Nature Conservancy. Translated a global marine conservation issue into a local context, researching the problem of microplastic pollution in the Indian Ocean. Conducted a gap analysis of the infeasibility of existing detection and analysis methods, hypothesizing remote sensing applications as a solution to fill the data gap on microplastics

## HONORS AND AWARDS

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- **United Nations General Assembly (UNGA 79) Delegate** Selected as one of We Are Family Foundation’s 10 youth delegates to attend UNGA 79, UN Summit of the Future, and the New York City Climate Week to accelerate intergenerational collaboration for climate technology and justice (2024)
- **Erasmus Mundus Scholar** Recipient of the highly prestigious scholarship awarded by the European Commission, fully funding a two-year Master’s program in recognition of academic excellence and potential for impact (2024)
- **Audi Environmental Foundation Scholar** as one of the 15 international young leaders driving change and tackling the climate crisis, sponsored to attend the One Young World Summit in Manchester, UK (2022)
- **2020 Global Teen Leader** Selected as one of the 35 Three Dot Dash Global Teen Leaders by the We Are Family Foundation for work in sustainable urban development (2020)

- **Pradhan Mantri Rashtriya Bal Puraskar (erstwhile National Child Award for Exceptional Achievement)** Received the highest civilian honor for Indian citizens under the age of 18, for exceptional achievements in the field of innovation from the President and Prime Minister of India. One of the 6 recipients and the only female awarded in this field that year (2019)
- **College Board India Scholar** Merit-cum-needs scholarship for high-achieving students in India. Granted the scholarship towards the tuition fee for my study at Ashoka University (2020)
- **The Mars Generation 24 under 24 Leaders and Innovators in STEAM and Space** (2020)
- **Grand Winner of the Infosys Science Foundation Nutrition Challenge** for creating a revamped intervention model to tackle malnutrition in India. Received a scholarship worth INR 500,000 had the opportunity to watch the launch of the PSLV-C45 at ISRO (2019)
- **Grand Winner of the United Technologies Future of Buildings and Cities Challenge** for designing a smart and sustainable green building. Received the grand award worth USD 7500 and flown to West Palm Beach, Florida and New York City on all-expenses-paid trips (2018)
- **Grand Winner of the Big Data Challenge** sponsored by Medidata, Regeneron, and STEM Fellowship for designing an IoT-based system to maximize the yield of barley in the US (2018)
- **Distinguished Student Award of the New York Academy of Sciences** (2018)
- **Challenge 2030 Scholar of the New York Academy of Sciences** (2017)

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## SPEAKING ENGAGEMENTS AND VOLUNTEERING WORK

**Sustainable Energy for All:** One of the speakers on the “Mainstreaming Gender & Youth for SDG7: Challenges Opportunities for Young Women Entering the Workforce” alongside an MIT professor and Director of Shortlist Futures during the 79th United Nations General Assembly (Sep 2024)

**NASA South/Southeast Asia Research Initiative Meeting:** Contributed to the “Synthesis Meeting on Scientific Foundations of Natural Climate Solutions in Tree Based Systems of LCLUC in South Asia” meeting in India by organizing logistics and presenting a scientific poster on *Mapping Coastal Erosion using Google Earth Engine and QGIS* (Apr 2024)

**Imperial College London - Grantham Institute for Climate Change and the Environment - Women in STEM Seminar: Public Engagement with Climate Science:** As one of the four youth activists and speakers, led a conversation on the outcomes of COP26, ecofeminism, and approaches to engaging with the public over climate science (Nov 2021)

**Intrepid Sea, Air, and Space Museum’s GOALS for Girls Summer Technology and Engineering Program:** (Aug 2021)

**Youthtopia World:** Hosted a workshop on “Invention for Change” with Joshua Oluwaseyi (climate activist featured on Teen Vogue 21 under 21) (Jun 2021)

**MAKERS Conference, India:** Speaker line-up included the President of NASSCOM and VP of Intel India; Led a discussion on “STEM Mindset: The Key to A Better Future for Girls in India” (Mar 2021)

**Global Innovation and Youth Leaders Summit (GIYLS):** Delivered a keynote on “Navigating the Innovation and Changemaking Spheres as a BIPOC Woman in STEM” (Sep 2020)

**Young Leaders Alliance of the Global Awareness Movement:** Led a conversation on sexism and misogyny in the modern world alongside Dr. Leyla Hussein, Rector of the University of St Andrews, and other activists (Aug 2020)

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## CERTIFICATIONS

**University of Oxford:** Completed the eight-week course offered by The Oxford School of Climate Change in Hilary (2023)

**Columbia University:** Participated in the Global Collaboratory Fellowship and partnered with Litro de Luz, a Brazilian organization that provides sustainable lighting solutions, to develop a compelling pitch deck to increase funding opportunities for the organization’s growth and outreach (2023)

**TechCamp Kochi:** Invited by the US Consulate General Chennai to attend an all-expense-paid innovation and technology-based workshop on ocean sustainability (2022)

**Hack and Learn, University of Oxford:** Participated in the University of Oxford Government Outcomes Lab’s Hack and Learn event and populated INDIGO Lab’s Impact Bond Dataset to enable better data insights on the alignments between social outcome metrics and SDGs (2021)

**Perimeter Institute for Theoretical Physics:** Attended the International Summer School for Young Physicists program as one of the 15 international students (and 30 students overall) with full scholarship (2019)

**Yale University:** Attended the session in Applied Science and Engineering (ASE) of the Yale Young Global Scholars program with a near-full scholarship. Selected as one of the ten speakers from a pool of 100+ students for the YYGS ASE and IAS Speaker Series held at Yale Law School (2018)

**The New York Academy of Sciences:** Collaborated with international students and co-developed twelve STEM projects. Notable projects include a device to non-invasively determine micronutrient levels, a smart green skyscraper, predictive data analytics for optimizing barley yield, and a novel data-driven intervention model to combat malnutrition in India. Grand winner of three international innovation challenges and a finalist in four challenges. Invited to New York City and Florida on all-expenses-paid trips two years in a row to present these projects to eminent personalities including Nobel Laureates and CEOs of Fortune 500 companies (2016-2020)