

# AHANA DEB

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PRINCIPAL INTERESTS	Reinforcement Learning, Machine Learning, Artificial Intelligence, Deep Learning	
EDUCATIONAL BACKGROUND	<b>Graduate Student in Reinforcement Learning</b> Universitat Pompeu Fabra, Barcelona, Spain	1st year
	<b>Masters in Intelligent Interactive Systems</b> Universitat Pompeu Fabra, Barcelona, Spain (Position 1 in class, GPA 9,38)	2022-2023
	<ul style="list-style-type: none"><li>• <b>Master thesis title:</b> <a href="#">Inverse reinforcement learning with linearly-solvable MDPs for multiple reward functions</a> (Supervised by Anders Jonsson, Vicenç Gómez, Mario Ceresa)</li></ul>	
	<b>B.E. Instrumentation and Electronics Engineering</b> Jadavpur University, Kolkata, India	2016-2020
	<ul style="list-style-type: none"><li>• <b>Bachelor thesis title:</b> Analysis of anisotropic diffusion and Perona-Malik model for enhanced edge-preservation and image denoising (Supervised by Professor Shyamali Mitra)</li></ul>	
RESEARCH PUBLICATIONS	<ul style="list-style-type: none"><li>• Workshop paper presented at <b>EWRL 2024</b>: <a href="#">Tractable Offline Learning of Regular Decision Processes</a>. (Authors - <b>Ahana Deb</b>, Roberto Cipollone, Anders Jonsson, Alessandro Ronca, Mohammad Sadegh Talebi)</li><li>• Conference paper (Oral Presentation) in <b>INTERSPEECH 2023</b>: <a href="#">BeAts: Bengali Speech Acts Recognition using Multimodal Attention Fusion</a>. (Authors - <b>Ahana Deb</b>, Sayan Nag, Ayan Mahapatra, Soumitri Chattopadhyay, Aritra Marik, Pijush Kanti Gayen, Shankha Sanyal, Archi Banerjee, Samir Karmakar)</li><li>• <i>Paper under review: Improved offline learning of regular decision processes using language metrics.</i> (Authors - <b>Ahana Deb</b>, Roberto Cipollone, Anders Jonsson, Alessandro Ronca, Mohammad Sadegh Talebi) (can be made available if required).</li></ul>	
WORK EXPERIENCE	<ul style="list-style-type: none"><li>• <b>Research Intern at Joint Research Center, European Commission, 2023:</b> I did my master thesis "Inverse reinforcement learning with linearly-solvable MDPs for multiple reward functions" under the supervision of Anders Jonsson, Vicenç Gómez, Mario Ceresa. Available <a href="#">here</a>.</li><li>• <b>Research Fellow at Sir C.V. Raman Centre for Physics and Music, Jadavpur University, 2020-2022:</b> Analysis and classification techniques of Hindustani Music, Corpus development of speech data in Bengali, and proposing novel optimal transport pipelines for speech act recognition, under Dr. Shankha Sanyal and Prof. Dipak Ghosh</li><li>• <b>Research Intern at TCS Innovation Labs, Kolkata, 2019:</b> Developed algorithm for 3-view motion and position detection of an object from an independently moving monocular camera, implemented deblurring with DeepGyro CNN architecture for a monocular camera, under Dr. Arnab Sinha</li></ul>	

## TEACHING EXPERIENCE

- **Teaching assistant** for [DQN tutorial](#), Antonin Raffin, Barcelona Reinforcement Learning Summer School, 2023.
- **Graduate Teaching Assistant** for course **Artificial Intelligence** (2024-), Universitat Pompeu Fabra
- **Graduate Teaching Assistant** for course **Object Oriented Programming** (2023-), Universitat Pompeu Fabra

## SUMMER SCHOOLS and WORKSHOPS

- Participated in the first ever [LeRobot Hackathon, 2024](#) organized by HuggingFace, Toulouse, France.
- Attended [AISTATS, 2024](#) in Valencia, Spain.
- Attended [Workshop on Optimal Transport 2024](#), Humboldt University of Berlin, Germany
- Co-organizer of **Reinforcement Learning Summer School**, Universitat Pompeu Fabra, Barcelona ([RLSS 2023](#))
- Attended ESSAI 2023 – **European Summer School on Artificial Intelligence**, Univerza v Ljubljani, Slovenia

## PROGRAMMING LANGUAGES & LIBRARIES

- **Very fluent:** Python, Java, PyTorch, TensorFlow, R, pandas, Keras, NumPy, Scikit-learn, etc
- **Working knowledge:** C++, C, Robot Operating System (ROS), Julia, etc

## RELEVANT COURSES

- Reinforcement Learning (Master's course): Position 1 in class
- Probabilistic Graphical Models (Master's course): Position 1 in class
- Others- Linear algebra, Calculus, Probability Theory, and Statistics, etc