

Shweta Prasad

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EDUCATION

Ashoka University, Sonipat, Haryana, India

Aug 2018 – Aug 2022

BSc. Hons. in Computer Science with a Biology minor

- Lab Affiliation: Neuroethology Lab, Ashoka University
- Cumulative GPA: 3.58 / 4.0

Neuromatch Academy, School of Computational Neuroscience

Jul 2020 – Jul 2020

Interactive Track student, mentored by Dr. Adrien Peyrache, McGill University, Canada

RESEARCH EXPERIENCE

Neuroethology Lab, Ashoka University

Aug 2018 – Present

Supervisor: Dr. K. Bittu Rajaraman (Associate Professor, Depts. of Biology and Psychology)

- Ongoing project: Mathematically modelling call pattern generation and recognition in bushcrickets using complex dynamical system models.
- Independent study completed in topics in computational neuroscience with a focus on understanding spike sorting neural data, doing field work and assisting Ph.D students in designing behavioral experiments.

Neuromatch Academy

Jul 2020 – Jul 2020

Mentor: Dr. Adrien Peyrache, McGill University, Canada

- Completed group project: Decoding neural data from Steinmetz, et al., 2019, to predict erroneous decision making in trained mice. We made use of GLMs to predict whether the performance of trained mice that performed well in an 2-AUC experimental paradigm was affected by previous erroneous decisions. Results were inconclusive.

Single Molecule Biophysics, Haldar Lab, Ashoka University

Dec 2019 – Present

Supervisors: Dr. Shubhasis Haldar (Assistant Professor, Dept. of Biology) and Dr. Debayan Gupta (Assistant Professor, Dept. of Computer Science)

- Ongoing project: Building and improving covalent magnetic tweezers and associated software(s) for week-long studies of single molecules biophysics. (Currently on hold, due to COVID-19)

PROJECTS

A Detailed Exploration of Cellular Automata

Final Project, Theory of Computation

Course taught by Dr. Mahavir Jhawar in Spring 2021.

Simulated all possible elementary automata, studied its statistical mechanics and applications in solving the majority problem (a density classification task), both theoretically and as a proposed model to explain the less understood phenomenon of stomatal patchiness.

Efficient Face-Mask Detection using Deep Nets for Syndromic Surveillance

Final Project, Introduction to Machine Learning

Course taught by Dr. Ravi Kothari in Monsoon 2020.

This project involved building an efficient face-mask detection tool suitable for cheap computation such as on mobile phones, webcams or CCTV cameras, so as to allow for real-time feedback into disease dynamics models. This project received the highest grades given across three iterations of this course. More details available upon request.

AWARDS & SCHOLARSHIPS

- Dean's List: Spring Semester 2019 – Summer Semester 2019
For attaining a semester GPA of at least 3.65.

TEACHING

Neuromatch Academy, Deep Learning Summer School

Jul 2021 – Aug 2021

Teaching Assistant

Summer school focussing on tools for Computational Neuroscience.

Run a pod of 8 – 10 students of various levels of expertise and assist them in their learning throughout the course.

Algorithm Design and Analysis

Jan 2021 – Apr 2021

Undergraduate Teaching Assistant

Course taught by Dr. Subhash Bhatta in Spring 2021.

LEADERSHIP ROLES	Student Representative, Department of Computer Science , Ashoka University Appointed by the Head of Department, Dept. of CS. I serve as primary coordinator of all communication between the department and the student body, and am responsible for outreach and organization within the student body.	Sep 2020 – Sep 2021
	Ministry of Academic Affairs , Student Government , Ashoka University Member of the Academic Advisory Board: The AAB is consulted by the MAA before policy decisions are made.	Sep 2020 – Sep 2021
	President, Vistaar - The Music Society , Ashoka University Vistaar is the largest student-run organization at Ashoka. As President, I: <ul style="list-style-type: none"> ▪ Brought about policy changes with regards to University facilities dispensed via Vistaar. ▪ Organized multiple stand-alone and collaborative on- campus events ▪ Shifted focus to building an inclusive, collaborative atmosphere for growth of musical engagement on campus 	Sep 2019 – Mar 2020
	Ministry of Community Well-being : Infirmary & Sexual Health Dept., Student Government , Ashoka University	Jul 2019 – Mar 2019
ACADEMIC SOCIETIES	Women in Computing Society , Ashoka University Member of Events Team. WICS, Ashoka is a student led academic society that focuses on inculcating an inclusive and productive space for women and non-binary folk in CS. We work to bring more women into CS and STEM.	Aug 2018 – Present
OTHER WORK EXPERIENCE	Alumni Relations Office, Ashoka University Associate Manager Efficiently manage databases and a web portal for alums. Strategic planning to increase alumni engagement.	Mar 2021 – Present
	DiverseNeuro: A Diversity Project Co-Founder and Researcher A collaborative research venture between IISER Pune and Ashoka University; Aims to study the international academic demographic in neuroscience in order to help inclusive policy-making.	Jun 2020 – Present
	The Neuroscience Outreach Network , Princeton, NJ, USA Community Outreach and Content Coordinator The goal of this project is to enable access to education in neuroscience to students in underserved communities, to tailor virtual or classroom lessons and materials for individual grade levels, from kindergarten to 12th grade and beyond, and provide lessons and materials to teachers, students and their caretakers in their native language (e.g., Spanish, Hindi, Russian, etc.).	Aug 2020 – Jan 2021
	Writer, Kalinga Magazine , Ashoka University	Sep 2018 – Nov 2019
	Writer, Pehchaan Magazine , Ashoka University	Jan 2019 – Apr 2019
CONFERENCES	ATTENDED <ul style="list-style-type: none"> ▪ No Garland Neuroscience, 2020 – IISER Pune ▪ Animal Behavior Society Conference 2020 ▪ JuliaCon 2020 ▪ Insect Navigation Workshop 2020, U of Sussex ▪ ICMNS 2020 ▪ Neuromatch 1.0, 2.0 ▪ OCNS*2020 : Computational Neuroscience conference ▪ ViDA 2020: Virtual Dopamine Conference 	
LANGUAGES	English, Malayalam, Hindi	
SKILLS	TOOLS L ^A T _E X, X _Y L _A T _E X, Excel/GSheets, GIMP, Selenium, Adobe Illustrator PL Python, C, C++, C, C#/.NET, R, Java, Julia, AppScript, bash script, JS	
INTERESTS	Illustration, writing, music, hiking, cycling, science communication.	