# Naman Agrawal

# Work Experience

## Cornell University | Graduate Research Assistant | Ithaca, NY

Aug 2021 - Present

- Developed ML models to predict the state-space residence of animals under different food deprivation conditions
- Constructed experimental rigs to study foraging behavior of flies
- Conducted large scale screenings to find neurons underlying foraging decisions in flies

# MPI for Neurobiology of Behavior | Research Assistant | Bonn, Germany

May 2019 - June 2020

- Conducted high precision surgeries on fruit flies
- Targeted and activated single neurons in flies using micro-pipettes

#### Universitat Regensburg | Research Intern | Regensburg, Germany

May 2018 - Aug 2018

Conducted experiments on neurobiological mechanisms of spontaneous behavior using optogenetics in Drosophila

## National Center for Biological Sciences | Research Intern | Bengaluru, India

May 2017 – Aug 2017

- Modelling Avian vision and Color analysis using RStudio
- Analysis of Butterfly population data of Bengaluru using RStudio

## InStem -NCBS | Research Intern | Bengaluru, India

May 2016 - Aug 2016

• Conducted experiments on Drosophila stem cell proliferation

## Education

Cornell University 2021 - Present

Graduate Program in Neurobiology and Behavior, Major- Cognitive and Systems Neuroscience

## Indian Institute of Science Education and Research, Kolkata

2015 - 2020

Integrated BS-MS

9.15/10 CGPA

#### Skills

**Hardware**: Strong proficiency in hardware development for quantification of animal behavior using Arduino, Raspberry Pi and IoT. Data storage and analysis using Bonsai and Python

Coding: Python, Scikit-Learn, pandas, scipy, numpy, matplotlib, RStudio, LATEX

Bench Skills: Fly husbandry; Making and maintaining crosses; Brain and gut dissection; Optogenetics;

Fluorescence and Confocal Microscopy

## Selected Publications

- Deepthi Mahishi, Naman Agrawal, Wenshuai Jiang, Nilay Yapici From Mammals to Insects: Exploring the Genetic and Neural Basis of Eating Behavior in revision
- Haein Kim, Ziqing Zhong, Xinyue Cui, Hayeon Sung, Naman Agrawal, Tianxing Jiang, Monica Dus, Nilay Yapici -HisCl1 regulates gustatory habituation in sweet taste neurons and mediates sugar ingestion in Drosophila. - in revision

## Organizing Roles

# Vice-President - Graduate Student Improv Club

2021-

A group dedicated to improving mental health amongst graduate students at Cornell University through fun improv games

#### Vice President - Cornell India Association

2021-22

A club that aims to provide support to graduate students of South Asian descent during their time at Cornell University

# Co-organizer - Neuro Study group

2020

an international group of neuroscience students who self study neuroscience and have weekly discussions

#### Lead Designer and Organizer

2020

Headed the design team for Cogito137 at IISER Kolkata, crafted media for the National Post Doc Symposium in collaboration with NCBS, and orchestrated the 'Scicomm for Scientists 2021' workshop by DST, enhancing science communication and visual engagement across platforms.

#### Founding Member and Key Contributor

2017 - 19

Instrumental in establishing the IISER Kolkata Student Alumni Cell, organized and designed Lexis, the institute's literary festival, and creatively shaped Inquivesta 8, the annual science fest, enhancing campus culture and engagement.

# Mentoring and Teaching Roles

## Course Development TA | Introduction to Neuroscience | Cornell University

2024

- Helped course instructors update their materials to include contemporary examples
- Developed and taught an online resource to help students understand the basics of AI (find here)
- Taught 2.5 hours of Discussion Sections per week

## **Teaching Assistant** | Introduction to Neuroscience | Cornell University

2023

• Taught 2.5 hours of Discussion Sections per week, apart from grading and attending lectures

## Mentoring Undergraduates | Yapici Lab | Cornell University

2021-

Successfully mentored several undergraduates, who have since excelled and achieved notable success in their current endeavors

- Sophie Gustin, current position Senior Undergraduate student at Cornell University
- Catherine Schweiger, current position Senior Undergraduate student at Cornell University
- Claire Makino Duan, current position Research Technician, Harnett Lab, MIT
- Joshua Dov Epstein, current position Clinical Research Associate Recovery Without Walls

# Honours and Awards

- 2024: Selected to join the prestigious Cornell CTI Early Career Graduate Teaching Cohort, proactively enhancing teaching capabilities and course design through specialized workshops.
- 2023: Voluntarily enrolled in the Cajal Neurokit Development Programme to master computational analysis of behavior and actively attended the Neurobiology of Drosophila meeting at CSHL. Participated in Cornell's GET SET workshops to refine teaching design techniques.
- 2022: Actively engaged at the Society for Neuroscience (SfN 2022) and pursued advanced computational neuroscience training at the Neuromatch Academy, demonstrating a commitment to academic excellence and professional growth.
- 2021: Spearheaded the 'Scicomm for Scientists 2021' initiative under DST's Karyashala scheme to enhance science communication among peers. Took initiative to participate in the Methods in Drosophila Biology workshop at CCAMP Bangalore and attended the neurofemIndia conference to support diversity in neuroscience.
- 2020: Sought out participation in the NeuroNovember Conclave to stay abreast of emerging neuroscience trends and attended a Science Writing workshop at IISER Pune, actively improving scientific communication skills.
- 2018 & 2017: Consistently attended the annual 'Frontiers in Biology' conference at IISER Kolkata, actively keeping pace with evolving biological research.