

Mrugank Dake

Clayspace Lab,
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EDUCATION & TRAINING

2021 - present PhD, New York University (NYU), Department of Psychology, Advisor: Dr. Clayton Curtis
2016 - 2021 BS-MS, Indian Institute of Science Education and Research (IISER) Tirupati, Major in Biology & Minor in Physics

POSTER PRESENTATIONS

2023 Do perturbations to visual cortex impact visual working memory?; SfN 2023
2019 CoCa coli: probiotic immunotherapy against colon cancer; iGEM 2019

RESEARCH EXPERIENCE

2021 - 2024 Role of alpha clock in spatial accuracy of visual working memory, Advisor: Dr. Clayton Curtis
2021 - 2024 A robust evaluation of sensory recruitment hypothesis with V1 as the test ground, Advisor: Dr. Clayton Curtis
2020 - 2021 Statistical and Machine learning approaches to Squirrel Acoustics, Advisor: Dr. Nandini Rajamani, IISER Tirupati (Masters Thesis)
2019 Preliminary EEG and MRS analysis for Attention Blink, Advisor: Dr. Sridharan Devarajan, IISc Bangalore
2018 - 2019 iGEM 2019 team projet "CoCa coli: designing a colon cancer targeting *E. coli*", Advisors: Dr. Basuthkar Rao, Dr. Raju Mukherjee, IISER Tirupati
2018 - 2019 Establishing primary hippocampal culture from goat hippocampal neurons to test effects of hyperglycemia, Advisor: Dr. Vasudharani Devanathan, IISER Tirupati
2018 Identifying differentially expressing tumor suppressor genes in *Drosophila melanogaster* in wing and haltere imaginal discs, Advisor: Dr. L S Shashidhara, IISER Tirupati
2018 RNA Origami using *in vitro* replication and transcription, Advisor: Dr. Ashwani Sharma, IISER Tirupati
2017 Standardizing protocol for RNA and DNA extraction from *Arabidopsis*, Advisor: Dr. Eswarayya Ramireddy, IISER Tirupati
2017 Head direction cell model for rodents with internal updating mechanism, Advisor: Dr. Collins Assisi, IISER Pune

FELLOWSHIPS & AWARDS

2021 - present MacCracken Doctoral Fellowship, New York University
2020 Indian Biological Engineering Competition (iBEC) 2020 Grant: Team mentor for International Genetically Engineered Machine (iGEM) Manav Rachna Institute
2019 Indian Biological Engineering Competition (iBEC) 2019 Grant and Gold Medal at Giant

	Jamboree, Boston: Student Team Leader for International Genetically Engineered Machine (iGEM) IISER_Tirupati
2016 - 2021	Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship, DST India
2015	Pune Regional Winner and 5th at National Level for Indian National Brain Bee (INBB)

TEACHING & MENTORING

2023	TA for Introduction to Cognitive Neuroscience with Dr. Clayton Curtis, NYU
2023	Teaching Assistant for Linear Systems with Dr. Larry Maloney, NYU
2020 - 2021	Statistics Tutor at Chegg India
2019 - 2020	Biology Tutor at Sanfoundry, Sanfoundry's Global Learning Initiative
2019 - 2021	Biology Tutor at Chegg India

VOLUNTEER ROLES

2023	Website Coordinator for Climatedmatch Academy 2023
2023	Student organizer for PhD Cognition and Perception 2023 Open House, NYU
2016 - 2020	Co-ordinator at Bio wissen (Biology Club), IISER Tirupati
2017	Co-ordinator at Shemushi (Quiz Club), IISER Tirupati
2016	Rural education volunteer at Disha, Student Outreach Club, IISER Pune

SKILLS

- Programming: Python, MATLAB, R, HTML/CSS, Javascript
- Cognitive neuroscience methods: EEG, fMRI, TMS
- Bacterial and animal cell culture
- Molecular and synthetic biology techniques
- Confocal and fluorescence microscopy
- *Drosophila* genetics and larval dissections