

Nishant Jana

Curriculum Vitae

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| Personal Information |  |
| E-Mail  Github  Contact Number  Citizenship  Date of Birth  Permanent Address (Indian) | [nishantjana5@gmail.com](mailto:nishantjana5@gmail.com)  [github.com/invisilico](http://www.github.com/invisilico) (@invisilico)  +91 99204 31714  Indian  25th of November, 1999  M – 803 Bakeri Swara  Near ABB Campus  Makarpura Maneja Road  Maneja, Vadodara 390013, India |
| Research Experience |  |
| Position  Supervisor  Area of Research  Position  Supervisor  Area of Research  Position  Supervisor  Area of Research | Collaborator, (July 2020 – Present)  Dr. Horacio de la Iglesia,  Dept. of Biology, University of Washington, Seattle.  Digital Rhythms Project; Rhythms in Human Behaviour: Sleep and Work  Visiting Student, (Dec 2019)  Dr. Sheeba Vasu  Chronobiology and Behavioural Neurogenetics Lab, JNCASR, Bangalore  Circadian rhythms in redox state of pacemaker neurons [proposed project]  Student Researcher, (May 2019 – May 2021)  Dr. S. Sahabudeen  Dept. of Biotechnology, SBE, SRM IST, Chennai, India   1. Phenotypic differences in fly behaviour with toxin exposure 2. Fruit fly model of Tauopathies (Transgenic Alzheimer’s model) 3. Variance of exposure level of toxins in vial raised populations of flies   <https://github.com/invisilico/interesting_experiments/blob/main/README.md> |
| Work Experience |  |
| Position  Company | Teaching Assistant, (July 2021)  Neuromatch Academy Inc., [Computational Neuroscience Summer School] |
| Education |  |
| Presently Pursued Degree  Institution  Sr. Secondary School  Secondary School  Institution | Bachelor’s in Technology, Biotechnology (2017 – 2021), (79.25%)  SRM Instititute of Science and Technology  All India Senior School Certificate Examination (2017)(77%)  All India Secondary School Examination (CBSE) (2015)(9.6 CGPA)  R. N. Podar School, Affiliated to CBSE, Mumbai, India |
| Summer Schools |  |
| August 2021  May - August 2020  Highlights  July 2020  Highlights | NeuromatchAcademy: Deep Learning [Interactive]  SRBR Chronoschool 2020  Made my own tool to study Android App timestamps  Joined the Digital Rhythms Project, with the de la Iglesia lab  Made tutorial notebooks to aid teaching of neurobehaviour experiments  NeuromatchAcademy: Computational Neuroscience [Interactive]  Worked with Dr. Steinzmetz’s Neuropixel data from 2AFC task  "Why do task engaged mice fail sometimes?" |
| Conferences Attended |  |
| January 2020  Poster presented  February 2019  Poster presented  (Online) July 2021  (Online) October 2020  (Online) July 2020  (Online) May 2020  (Online) March 2020 | 5th Asia Pacific Drosphila Research Conference (APDRC‘5), Pune  “Comprehensive study on the Bisphenol-A induced *Drosophila* model for Autism Spectrum Disorders with co-treatment by Cerium oxide Nanoparticles and U0126 MAP Kinase inhibitor: genotoxicity, oxidative stress, apoptosis and behavioural irregularities.”  Accelerating Biology, 2019 (BRAF – CDAC), IISER-Pune  "Computing machinery and evolutionary survival"  International Conference on Chronobiology 2021, JNCASR and UC Davis  Neuromatch 3.0  Society for Developmental Biology, 79th Annual Meeting  Neuromatch 2.0, Neurizons2020 (9th, Biennial)  Neuromatch Unconference |
| Publications |  |
| 2021 | Role of cerium oxide nanoparticles in decreasing oxidative stress and developmental delays in *Drosophila melanogaster* as an in-vivo model for Bisphenol-A toxicity. A. Sarkar, *et al.*, *Chemosphere* **284**, 131363  [10.1016/j.chemosphere.2021.131363](https://doi.org/10.1016/j.chemosphere.2021.131363) |
| Ongoing Projects |  |
| With de la Iglesia Lab, UW  By Self | 1. Digital Rhythms Project – Actively Collecting Data   <https://delaiglesialab.github.io/DigitalRhythmsProject/>   1. Tutorial notebooks – Made freely available to professors for use   <https://invisilico.github.io/Tutorial-Notebooks/>   1. Mapping clock informed navigation circuitry in *fruit flies*   Analysing the Janelia fly hemibrain EM data to model connections  between pacemaker neurons and central complex/EPG neurons |
| Computer/Hardware Related Skills |  |
| Programming Languages  Relevant Software  Fab Skills  Hardware  Other Notable Information | Python3/2.7, MATLAB and R  Worked with C-Trax, JAABA and familiar with APT, DeepLabCut  Attended Neurodata Without Borders orientation for effective code sharing  Built custom fly tracking arenas using 3D printing and Laser cutting  Constructed an integrated fly tracking set-up using an old laptop:  Using back of faulty LCD panel for perfectly diffused light source and a functional screen for closed loop experiments using psychobox and some custom code on a linux system.  User-developer of TOPAS-MC and nBio, A Monte-Carlo Simulation toolkit for biological molecules based on Geant4 Particle data. |
| Online Courses |  |
| Computational Neuroscience  Neuroscience  Chronobiology  Python, GitHub, Jupyter  MATLAB  Statistics and  Experimental Design  Game theory  Theory of Computation  Computer Vision | Computational Neuroscience – University of Washington, Seattle, Coursera  Medical Neuroscience – Duke University, Coursera (ongoing)  Visual Perception and the Brain – Duke University, Coursersa  Circaidan Rhythms: How Rhythms Structure Life – LMU Munich, Coursera  Applied Plotting, Charting & Data Representation in Python - UM, Coursera  Introduction to Data Science in Python – University of Michigan, Coursera  Google IT Automation with Python (5 part+project) – Google, Coursera  Introduction to Programming in MATLAB – Vanderbilt Univesity, Coursera  Practical Data Science with MATLAB – Mathworks, Coursera  Statistics with R (5 part + Project) – Duke University, Coursera  Inferential Statistical Analysis with Python – University of Michigan, Coursera  Bayesian Statistics: From concept to data analysis - UC Santa cruz, Coursera  Experimentation for Improvement – McMaster Univeristy, Coursera  Welcome to Game Theory – University of Tokyo, Coursera  Game Theory with Python – Coursera Project Network, Coursera  Computer Science: Algorithms, Theory and Machines - Princeton, Coursera  AWS computer vision: Getting started with GluonCV - AWS, Coursera  Computer Vision Basics – SUNY, UB, Coursera |
| Communication Skills |  |
| Languages | English (Most used and proficient in, All formal education in English)  Hindi, Bengali (Fluency in speech, some reading and writing) |