

ANTONY KIRAN KOLARIKKAL DAVID

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Education

Aug 2018 – May 2023	BS-MS Dual Degree (Specialized in Biology) INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH IISER PUNE, INDIA An Autonomous Institution of the Ministry of Education, Govt. of India
Jun 2015 - Mar 2017	HIGHER SECONDARY SCHOOLING-INTEGRATED SCIENCES STREAM (TECHNICAL) MODEL TECHNICAL HIGHER SECONDARY SCHOOL Board of Higher Secondary Examinations, Government of Kerala
Jun 2014 – Mar 2015	SECONDARY SCHOOL LEAVING CERTIFICATE (SSLC) ST. PHILOMINA'S HSS General Education Department, Government of Kerala

Research Experience

June 2023 – April 2024	Project Assistant: IISER Pune Project: Elucidating the mechanisms of neuronal homeostasis Supervisor: Prof. Aurnab Ghose, Division of Biology, IISER Pune
May 2022 – May 2023	Master's Thesis Student: Neuronal Connectivity Laboratory Project Title: Visually guided behaviours in Zebrafish larvae and the role of Fmn2b Supervisor: Prof. Aurnab Ghose, Division of Biology, IISER Pune
Jan 2022 - Apr 2022	Semester Project Student: Neuronal Connectivity Laboratory Project Title: Modelling Neurodevelopmental disorders in zebrafish Supervisor: Prof. Aurnab Ghose, Division of Biology, IISER Pune
Aug 2021 – Feb 2022	R&D intern: Curem Biotech LLP (Part-time) Project Title: In-Silico designing and optimizing Aptamers against bio markers for <i>Plasmodium falciparum</i> malaria Mentor: Prof. Saikrishnan Kayarat, Division of Biology, IISER Pune
Aug 2021 – Jan 2022	Semester Project Student: Computational Neurobiology Laboratory Project Title: Simulate computational models for Astrocyte-Neuron interaction Supervisor: Dr. Suhita Nadkarni, Division of Biology, IISER Pune
May 2021 – June 2021	Summer Intern: Weather, Climate and People Project Title: BharatSim for compartmentalized epidemiological modelling Supervisor: Dr. Joy Merwin Monteiro, Division of Earth, and Climate Science, IISER Pune
Nov 2019 – Nov 2020	Core Team member: iGEM IISER-Pune-India 2020 Project title: Anopheles: The Half Blood Princess Advisor: Prof. Sanjeev Galande, Division of Biology, IISER Pune (currently on lien to Shiv Nadar University, Uttar Pradesh, India)
Dec 2019 – Feb 2020	Winter Intern: Neuronal Connectivity Laboratory Supervisor: Prof. Aurnab Ghose, Division of Biology, IISER Pune

Awards & Fellowships

Mar 2022, National	CSIR-Junior Research Fellowship (CSIR-JRF): Council of Scientific and Industrial Research (CSIR), Government of India	All India Rank: 183
Mar 2022, National	Graduate Aptitude Test in Engineering (GATE) – Life Science Stream: Ministry of Education, Government of India	All India Rank: 1098
Nov 2020, International	Gold Medal at the iGEM Competition 2020 Represented IISER Pune at the International Genetically Engineered Machines (iGEM) competition, a synthetic biology expo organized by the iGEM foundation, and our team bagged the gold medal for satisfying the prescribed medal criteria.	

Nov 2020, International **iGEMer's Award 2020**
 Represented IISER Pune at the **International Genetically Engineered Machines (iGEM)** competition, a **synthetic biology expo** organized by the iGEM foundation and our team's project was voted the best project by all other competing teams.

Conferences and Workshops

Jul 2024, International **CAMP- Computational Approaches to Memory and Plasticity 2024**
 Attended this summer school in theoretical and computational modeling of memory and plasticity.

Feb 2023, National **No-Garland Neuroscience 2023 (NGN 2023)**
 Attended this 3-day conference on Neuroscience.

Sep 2022, National **Indian Zebrafish Investigators Meeting 2022 (IZIM 2022)**
 Attended this 3-day IZIM 2020 conference and was also part of the organizing committee.

Nov 2021, National **iGEM Indian Jamboree Meetup 2021**
 Attended this 2-day meetup at Goa and celebrated synthetic biology.

Nov 2020, International **iGEM Giant Jamboree 2020**
 Attended and presented the team project and won the gold medal for the project and iGEMer's award at this 10-day virtual event focused on synthetic biology along with an entrepreneur angle.

Jul 2020, National **All India iGEM Meet 2020**
 Attended this 2-day virtual meeting and presented our iGEM project.

Oct 2019, National **Robotics Workshop, IISER Pune**
 Attended this 2-day workshop and learned the basics on using Arduino microcontroller.

Skills

Molecular Biology: RT-qPCR, Western Blot, Molecular Cloning

Primary Neuronal culture: Adult mouse DRG, Drug treatments, Immunofluorescence

Zebrafish handling: Embryo microinjection, Natural breeding, Maintenance of different transgenic and wild type lines, Genotyping, Restrained larval behavioural experiments, Free swimming larval behavioural experiments

Mouse Handling: DRG and Sciatic nerve dissection, Cardiac Perfusion, Euthanasia, Intra-peritoneal, sub-cutaneous and intra-muscular injections, Oral gavage

Bioinformatics: Homology-based 3D structure prediction of proteins, Computational saturated mutagenesis, Motif identification and inhibitor designing, Molecular dynamic simulations

Theoretical modelling: Numerical computation involving stochastic differential equations, Compartmental models, Epidemiological models, Spiking neuron models

Data science: Computer Vision for video analysis, Data visualization, Statistical analysis, Web scrapping

Programming languages: Python, C++, R, Scala, MATLAB, Arduino, Bash

Microscopy: Widefield epifluorescence microscopy, Confocal microscopy

Other computational skills: Experience with SLURM based supercomputing clusters, Knowledge of basic computer hardware, Parallelization of codes on supercomputing clusters, Automation of routine tasks, GitHub

Other technical skills: Soldering, Basic Electronic circuits

Soft Skills: Presentations, Scientific writing, Digital Illustration, Ability to work in a team, Project management, Familiarity with most online communication platforms

Extra-curricular experience

Designer: Designed posters for various events in IISER Pune including TEDxIISERPune.

Hospitality volunteer: Volunteered for guest management during IISER Pune's Annual Fest.

Teaching volunteer: Actively volunteered to teach socio-economically disadvantaged children near the campus through the Abhyasika program. Involved in teaching basic Math and Science for them.