

Ravindra Raut

PhD Student with experience in computational and experimental genomics. Led interdisciplinary research projects. Expertise in next-generation sequencing and data analysis.



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Ravindra__Raut



<https://github.com/Ravindra-Raut>

EXPERIENCE

Assistant Research Coordinator, **TDU Bengaluru**, April 2019 - Sep 2019

- Supervised undergraduate students working on research projects.
- Planned and executed research techniques, procedures and tests.
- Oversaw groups of 5 students (one MSc and four BSc students) and assisted with academic projects.
- Directed students in performing and completing assigned tasks to coordinate qualitative research into transposable element analysis in rice genome.

Teaching Assistant, **NIT Durgapur**, Feb 2016 - April 2019

- Assisted for Bioinformatics Laboratory course to MTech Students.
- Prepared lessons according to course outline to convey all required material and deepen student understanding of subject matter.
- Oversaw classes of up to 25 students in Bioinformatics each year for 4 years.

Teaching Assistant, **TDU Bengaluru**, Feb 2017 - June 2017

- Assisted Ecology and Evolution course for chapters Introduction to Bioinformatics and transposons to MSc Students.
- Supported classroom activities, including tutoring, grading assignments and reviewing exams.

Internship, EGICORE, Lucknow, Aug 2014 - Nov 2014

- Developed and released database on Ayurvedic Plant Database with its Medicinal Applications, A-plants 1.0: (Home remedies by our grand's).

EDUCATION

- PhD Student, National Institute of Technology Durgapur, Sept 2014 - present
- Master of Technology, Biotechnology, Indian Institute of Technology Guwahati, 2011 - 2013, 7.8/10
- Master of Science, Biotechnology, SRTM university Nanded, 2007 - 2009, 56.7/100
- Bachelor of Science, Chemistry, Botany, Zoology, SRTM university Nanded, 2004 - 2007, 69.50/100

GRANTS AND AWARDS

- Institute fellowship | PhD, MHRD, 2014 - 2019
- GATE fellowship | MTech, MHRD, 2011 - 2013
- ICMR-JRF 2014
- ICAR-NET 2014
- Best Poster Award by International conference on ICMS Imphal, 2012
- GYAN Scholarship by SciGenom Research Foundation, 2019

SKILLS

Research

- Experimental design
- Cross-functional collaboration
- Coordinating scientific projects
- Technical project leadership
- Communicating science

Programming

- Python
- R: Tidyverse
- Bash
- Unix/Linux
- Perl
- Git and GitHub
- Galaxy
- HPC and cloud environments

Computational Biology

- Secondary and tertiary analysis of sequencing data: Illumina, Oxford Nanopore
- DNA, RNA, epigenomics, functional genomics, multi-omics
- Repeats Analysis
- SSR mining
- Bioinformatics tools, e.g. BLAST, GATK, SAMtools
- Genomic databases
- Bioconductor
- Data visualization: ggplot2, IGV, Plotly
- Phylogenetic Analysis
- Molecular Docking
- Molecular Simulation
- Computer Aided Drug Designing
- Digital Image Processing

Experimental Biology

- DNA-Seq, RNA-Seq
- PCR methods
- Molecular biology
- Bacterial and Plant tissue culture
- Microscopy

PUBLICATIONS

- Roy Barman, S, **Ravindra A. Raut**, et al. (2017) Recent advances in the development of transgenic crop plants, biosafety aspects and future perspectives, Plant Biotechnology, Volume 2, Transgenics, Stress Management, and Biosafety Issues, Apple Academic Press, Hard ISBN: 9781771885812
- **Ravindra Raut** (2012) Silk statistics of India, Muccalung, a souvenir published for international conference on “International Consultative Meeting on Seribiotechnology 2012” at Institute of Bioresources and Sustainable Development, Imphal, India

POSTERS

- NGBT2019 NextGen Genomics, Biology, Bioinformatics and Technologies (NGBT) Conference [Mumbai, India, Sept. 2019] Genome-Wide Analysis of Transposable elements in different Rice species and it's association in Plant disease resistance (R) genes in Oryza sativa Nipponbare
- National Symposium and Workshop on Future of functional genomic | Bengaluru, India, Oct. 2017| Genome wide analysis of transposons in Oryza sativa L.
- IBSD International conference on International Consultative Meeting on Seri biotechnology 2012| Imphal, India, Dec. 2012 | Development of Seri-Bioresource database
- IBSD International conference on International Consultative Meeting on Seri biotechnology 2012| Imphal, India, Dec. 2012 | Silkworm nucleotide databases

TALKS

- Talk and Hands-on | 8th training on NGS and Analysis on Genomics, Transcriptome and transposons | Bengaluru, India, Nov. 2018 | Hands on Session on Bioinformatics: Transposon Discovery and Annotation
- Talk and Hands-on | Hands-on Training on Next Generation Sequencing, Analysis & Its Applications | Bengaluru, India, Feb. 2019 | Hands on Session on Bioinformatics: Transposon Discovery and Annotation
- Talk and Hands-on | 12th training on Whole Genome Sequencing & Data Analysis | Bengaluru, India, May 2019| Hands on Session on Bioinformatics: Transposon Discovery and Annotation
- Talk | 14th Advanced Training Program on Genomics & Metagenomics | Bengaluru, India, July 2019 | Genome Browser and Databases

EXTRACURRICULAR ACTIVITIES

- Organizing Secretary for the 8th Training on NGS and Analysis on Genomics, Transcriptome and Transposons at The University of Transdisciplinary Health Sciences & Technology (TDU) Bengaluru, Nov 26, - Dec 1, 2018
- One of the organizers for eleven workshops on NGS Data Analysis on Genomics, Transcriptomics, MetaGenomics and Transposons and National Symposium on Future of Functional Genomics in the University of Transdisciplinary Health Sciences & Technology (TDU) Bengaluru.

ONLINE EDUCATION

Coursera

- Bioconductor for Genomic Data Science, August 14, 2020
- Genomic Data Science with Galaxy, August 11, 2020
- Introduction to Genomic Technologies, July 2020
- Introduction to Git and GitHub, July 18, 2020
- Data Visualization with Plotly Express, June 11, 2020
- Graphing with ggplot2, June 1, 2020

IBM

- Data Visualization Using Python, June, 2020
- Data Visualization with R, June, 2020

Datacamp

- Introduction to the Tidyverse, August 17, 2020