

Omkar Sathe

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EDUCATION

Birla Institute of Technology and Science, Pilani

Goa, India

Master of Science (Hons.) in Biological Sciences

Aug. 2021 – Jun. 2026

Bachelor of Engineering in Computer Science

Cumulative GPA : 9.40/10.00

Matoshree Prabodhinee Junior College of Science

Thane, India

Higher Secondary Certificate Examination

Aug. 2019 – Mar. 2021

Percentage : 98.6%

EXPERIENCE

Undergraduate Researcher | *Role of alternate splicing in stem cells*

Jan. 2023 – May. 2023

Under Prof. Indrani Talukdar

BITS Pilani K. K. Birla Goa Campus

- Researching about the role of alternate splicing in stem cell differentiation and maintaining pluripotency
- Identifying how alternate splicing affects the expression of certain genes
- Worked on the regulatory genes involved in stem cell differentiation
- Identifying splicing factors responsible for alternate splicing events

Undergraduate Researcher | *Identifying splicing events in diabetic cells*

Aug. 2023 – Present

Under Prof. Indrani Talukdar

BITS Pilani K. K. Birla Goa Campus

- Researching about the effect of Fatty acids and TNF- α on human kidney and neuronal cells
- Identifying the genes that undergo alternate splicing in pre-diabetic pancreatic cells in mice
- Identifying change in expression of said genes by designing primers
- Identifying the transcription factors that result in alternative splicing of key genes in diabetic cells

Summer Intern

May. 2023 – Jul. 2023

Jio Platforms Ltd., Hyderabad

Hyderabad, India

- Explored automation testing tools to automate common tasks like joining an online meet, replying to an email
- Worked on using Machine Learning to automate applications
- Worked on an NLP model to understand and interpret user commands

PROJECTS

Cell Tracking - Pancreatic stem cells on a polystyrene substrate

- Dataset of Pancreatic cells obtained from cell tracking challenge
- Used Fiji along with LabKit plugin for annotations and generating contours
- Implemented a U-Net model for semantic segmentation and cell tracking

Emotion Prediction using EEG

- Used a neural network model to identify emotions by training it on EEG dataset for Mental Emotional Sentiment Classification

SKILLS

Programming Languages: Python, R, MatLab, C/C++, JavaScript, HTML/CSS, Java, Verilog, Prolog

Frameworks: Selenium, Cucumber, JUnit, TestNG

Developer Tools: VS Code, JupyterNotebook, Anaconda, PyCharm, IntelliJ, Eclipse, Git

Libraries: pandas, NumPy, Matplotlib, PyTorch, TensorFlow, Seaborn

Wetlab: PCR, qPCR, RT-PCR, SDS Page, ELISA, DNA/RNA Isolation, Immunofluorescence, Immunohistochemistry, Western Blot, Cell Culture

Drylab: Gene Designing, Molecular Docking, Molecular Dynamics Simulation, Protein Modelling

Spoken languages: English, Hindi, Marathi

RELEVANT COURSES

Biological Sciences: General Biology, Biochemistry, Microbiology, Cell Biology, Integrated Biology, Molecular Biology, Enzymology, Genetics, Instrumental Methods of Analysis (Lab Course), Bioinformatics, Ecology, Animal Physiology, Plant Physiology, Recombinant DNA Technology

Computer Science: Computer Programming, Object Oriented Programming, Logic in Computer Science, Discrete Structures for Computer Science, Digital Design

Miscellaneous: Mathematics I (Multivariable and Vector Calculus), Mathematics II (Linear Algebra and Complex Analysis), Mathematics III (Differential Equations), Probability and Statistics, Thermodynamics, General Chemistry

AWARDS AND ACHIEVEMENTS

- **Rank 1 | Biological Sciences Department**

Currently ranked **1st** in the Department of Biological Sciences.

Ranked **1st** in all Biology courses offered by the department till date.

- **INSPIRE Scholarship Fellow**

Received INSPIRE scholarship (Innovation in Science Pursuit for Inspired Research), offered to students scoring top 1% in Higher Secondary Education; awarded for 4 consecutive semesters on account of exceptional academic performance

- **Gold Medal | National Art Exhibition**

Received Gold medal for my art works displayed in National Art Exhibition & Awards, held from 14th April to 16th April, 2023. The exhibition was held at Cymroza Art Gallery, Breach Candy, Mumbai