Ashish Kumar Sahoo
Curriculum Vitae

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EDUCATION

2014 - 2019	Integrated M.Sc. in BIOLOGICAL SCIENCES, **NISER** Bhubaneswar, India GPA: 7.78/10
MARCH 2013	All India Senior School Certificate Examination (Class XII–CBSE) SCORE: 81.6%
MARCH 2011	All India Secondary School Examination (Class X-CBSE) GPA: 10/10

RESEARCH EXPERIENCE

2019 - 2020 — Project student at NISER, Bhubaneswar
Title: **Co-Delivery of liposomal nano-particle formulations for disease treatment**
Supervisor: Dr. V Badireenath Konkimalla
SUMMARY: I expanded upon my Masters work to prepare Co-delivery systems for isothiocyanate and flavanoid compounds via liposome nano-particles for treatment of multiple ailments.

2017 - 2019 — Masters Thesis student at NISER, Bhubaneswar
Title: **Co-Delivery of nano-particle formulations for cancer therapy**
Supervisor: Dr. V Badireenath Konkimalla
SUMMARY: I formulated liposome based drug delivery systems incorporating hydrophobic isothiocyanates and Doxorubicin in a single formulation for enhanced activity on cancerous cell lines.

MAY - JUL 2016 — Summer Student at NISER, Bhubaneswar
Title: **Optogenetics along with Place and Grid Cells**
Supervisor: Dr. Praful Singru
SUMMARY: I studied the newly emerging field of optogenetics and history of light based techniques in biology, like CALI and Lasers. I also studied about the 2014 Nobel prize winning work on Place and Grid cells, dubbed as the brain's 'internal GPS'.

MAY - JUL 2015 — Summer Student at NISER, Bhubaneswar
Title: **Neuromodulation in the brain and neural circuits**
Supervisor: Dr. Praful Singru
SUMMARY: I studied about the basic morphology of the brain, neuronal signalling (resting potential, action potential, neurotransmitters, synaptic plasticity, LTP, LTD, Hebb's postulate), mechanosensation and visual system.

ONLINE COURSES

Computer Science

JUN-JULY 2021 — Machine learning in python with scikit-learn (Fun MOOC)

FEB-APR 2021 — Practical Data Science with MATLAB Specialization (Coursera)
Credential ID - TUAKJTBHP2RP
Courses included: Exploratory Data Analysis with MATLAB - 100% (DE6LKNL5R9WG)
Data Processing and Feature Engineering with MATLAB - 100% (MG3EUHJ7LVNV)
Predictive Modeling and Machine Learning with MATLAB - 100% (RGUA58HD67GF)
Data Science Project: MATLAB for the Real World - 100% (28KGPWLRT9RH)

SEP 2020 — DeepLearning.AI TensorFlow Developer Professional Certificate (Coursera)
Credential ID - HPRZQ2YEFK2E
Courses included: Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning - 100% (XJ3N4PP664JC)
Convolutional Neural Networks in TensorFlow - 100% (JVNLK96N3ZB8)
Natural Language Processing in TensorFlow - 100% (B7KVQ9HBZ4WJ)
Sequences, Time Series and Prediction - 100% (5XNANA369B4U)

JUL 2020 — Introduction to Relational Database and SQL (Coursera)

	Credential ID - C5D5GRZBT5UW
Jul 2020	Git + GitHub for Open Source Collaboration (Coursera)
	Credential ID - 4FUCN7XUD648
Apr 2020	Introduction to Data Science Specialization (Coursera)
	Credential ID - WKHLDBFJKFAE
Mar-Apr 2020	IBM Data Science Professional Certificate (Coursera)
	Credential ID - EN6LFVZDQ833
	Courses included: What is Data Science? - 100% (TVDH86TL24LJ) , Tools for Data Science - 100% (7SNJR4842HZA) , Data Science Methodology - 100% (2WXYGAJTMZYG), Python for Data Science and AI - 100% (75E9D8353VJE), Database and SQL for Data Science - 100% (RNBJB33YWXSA), Data Analysis with Python - 100% (YX6WKC2GQM8M), Data Visualization with Python - 100% (TZKWG8DANAQH), Machine Learning with Python - 100% (MVQU8Y5KZKS9), Applied Data Science Capstone - 100% (WNBVA2V7NXA6)

Neuroscience

May 20 -Jan 21	Neuroscience and Neuroimaging Specialization (Coursera)
	Credential ID - 5AVLWUT7MV2N
	Courses included:
	Fundamental Neuroscience for Neuroimaging- 100% (NPBKAQXFM5W4) ,
	Principles of fMRI 1 - 100% (9U7GCXTA4UXV),
	Principles of fMRI 2 - 100% (UDGKWLAVA3UE),
	Introduction to Neurohacking In R - 100% (SB9HNCZ76QJ7)
Aug 2020	Computational Neuroscience (Coursera)
	Credential ID - MN3VHN4J2UKH
	Grade Achieved - 100%
Jul-Aug 2020	Medical Neuroscience (Coursera)
	Credential ID - XMRJNZQPT6TK
	Grade Achieved - 99.02%

Experimental Techniques

Liposome formulation	Animal dissection (Drosophila, Fish and Mouse)
Transformation	Competent cell preparation
UV-vis spectroscopy	Fluorescence microscopy
Bright field microscopy	Immunostaining
RFLP (SNP detection)	DNA gel electrophoresis
DNA extraction and amplification	Microbial culture techniques
DNA cloning with plasmid vectors	

Publications

1. Mohanty, S.*, Sahoo, A. K.*, Konkimalla, V. B., Pal, A., & Si, S. C. (2020). Naringin in Combination with Isothiocyanates as Liposomal Formulations Potentiates the Anti-inflammatory Activity in Different Acute and Chronic Animal Models of Rheumatoid Arthritis. ACS Omega, 5(43), 28319–28332. https://doi.org/10.1021/acsomega.0c04300 (* - equal contribution)

2. Hanke, M., Poldrack, B., Wagner, A. S., Huijser, D., Sahoo, A. K., Boos, M., Steinkamp, S. R., Guenther, N., & Appelhoff, S. (2020). datalad/datalad-osf: More DataLad and OSF integration. https://doi.org/10.5281/ZENODO.3949513

Projects

Jun 2020	**Datalad OSF integration**
	DataLad extension that enables DataLad to work with the Open Science Framework (OSF).
	Code: (https://github.com/datalad/datalad-osf/)
Jun 2020	**BrainIAK Tutorials**
	BrainIAK tutorial repository that cover topics from basics to advanced fMRI analysis.
	Code: (https://github.com/brainiak/brainiak-tutorials/)

Awards and Achievements

November 2020	Joint CSIR UGC-NET Biology - *All India Rank 105 JRF NET CSIR qualified*
Nov 2020	TOEFL iBT Test - 117/120 (Reading - 30/30, Listening - 30/30, Speaking - 27/30, Writing - 30/30)
August 2020	Awarded Open Science Room participant mini-grant
June 2020	Awarded hackathon participant mini-grant for OHBM Brainhack
September 2018	GRE General Test - 332/340 (Verbal Reasoning - 166/170, Quantitative Reasoning - 166/170)
December 2017	CSIR UGC-NET Biology - *All India Rank 66 JRF NET CSIR qualified*
2014 - 2019	DST-INSPIRE Scholarship for Higher Education (SHE) by Government of India
October '15	Awarded *first prize* in intra-college essay competition organised by Government of India on "Preventive Vigilance as a tool of Good Governance"

Conferences/Workshops

2-20 Aug '21	Neuromatch Academy Deep Learning (interactive student)
5-23 Jul '21	Neuromatch Academy Computational Neuroscience (interactive student)
Oct '20 - Feb '21	ABCD ReproNim Course (Enrolled student)
27-31 Jul '20	NeuroHackademy 2020
13-31 Jul '20	Neuromatch Academy (observer)
23 Jun - 3 Jul '20	OS-SIG Open Science Room 2020
16-18 June '20	OHBM Brainhack 2020
6 Jan. '17	2nd Meeting of Indian Immunology Society - Odisha Chapter, at NISER, Bhubaneswar
26 - 29 Apr. '16	2nd Orientation Workshop on Laboratory Animal Sciences at ILS, Bhubaneswar
6-13 Mar. '16	International workshop-cum-conference on applications of systems and mathematical biology in the areas of stress, microbiome and probiotics (ASMB-SGMP) at NISER, Bhubaneswar
13-14 Dec. '15	Second Meeting of the Indian Subcontinent branch of the International Neuropeptide Society / Society for Biologically Active Peptides at NISER, Bhubaneswar

Volunteering

June - July 2021	Neuromatch Academy - Main Video Editor for NMA-DL and Video Editor for NMA-CN
June 2021	OS-SIG Open Science Room (OSR) - Emergent session manager
June 2020	Neuromatch Academy - Caption Editor