

Nalin KUMAR

Final Year Int. MSc | Aspiring ML Researcher

[in linkedin.com/in/nalin-kumar-7b92aa174](https://www.linkedin.com/in/nalin-kumar-7b92aa174) github.com/knalin55

+91 77177 80747 @ knalin55@gmail.com

@ nalin.kumar@niser.ac.in

241, Kaveri Hostel, NISER Campus, NISER, Bhubaneswar, India

[Personal Webpage](#)

EDUCATION

2016 - 2021	National Institute of Science Education and Research Integrated MSc Thesis Advisor: Dr. Subhankar Mishra Major Mathematics Minor Computer Science	Bhubaneswar, India
2014 - 2016	DAV Public School All India Senior School Certificate Examination(2016) by CBSE 92.3%	Patna, India

SKILLS

Programming Language	Python R C HTML \LaTeX
Tools & Softwares	MATLAB Mathematica MS Visual Studio Code Netbeans Streamlit RStudio
APIs & Libraries	Tensorflow Keras PyTorch Numpy Scikit-learn Pandas OpenCV
OS	Windows (XP, Vista, 7, 8, 10) Linux (Ubuntu 18.0.4 LTS, Ubuntu 19.0.4 Mate, Ubuntu 20.04.1 LTS, CentOS)
Machine Learning	Machine Learning Algorithms (Linear & Non-Linear Regression, Logistic Regression, KNN, Decision Tree, Random Forest, K-mean clustering) Deep Learning (RNN, GRU, LSTM, Attention, Transformer, CNN) NLP(Word Embeddings, Sentiment Analysis, NMT) Computer Vision (Object Classification, Object Detection & Recognition)
Statistics	Hypothesis Testing Parametric Inference Bayesian Inference

SCHOLARSHIPS

2016-21 INSPIRE Scholarship| DST, India

PUBLICATION(S)

2021	QUARC: Quaternion Multi-Modal Fusion Architecture For Hate Speech Classification [arXiv] Deepak Kumar*, Nalin Kumar*, Subhankar Mishra 2021 IEEE International Conference on Big Data and Smart Computing (BigComp) *equal contribution
------	---

WORK & EXPERIENCE

Odd Sem 2020	Semester Project NISER Semester Project under Dr. Subhankar Mishra in Neural Machine Translation (NMT). <ul style="list-style-type: none">> NMT of Atharvaveda (one of the Vedic scriptures of Hinduism).> Analysis of applicability of bilingual dictionary in NMT in extremely low-resource setting.	Bhubaneswar, India
--------------	--	--------------------

Oct 2020 Aug 2020	Data Science Intern TATA STEEL Worked under Mr. Sanjoy Biswas, Head of Advanced Analytics, Kalinganagar and Mr. Saibal Nandi, Head Analytics Marketing and Sales. <ul style="list-style-type: none"> ➤ Worked on detection and counting of steel reinforcement bars using deep learning. ➤ Worked on Dealer names matching (Entity Matching) using Machine Learning. ➤ Worked on Document Verification for FAMD Exports, TATA Steels, using text analytics and its UI development (using Streamlit) which is further deployed on GCP so that the app is accessible to the users remotely in COVID times. The project is identified under Shikhar Initiative and is estimated to save approx. INR 1 Cr. 	India
Even Sem 2020	Semester Project NISER Semester Project under Dr. Subhankar Mishra in Computer vision. <ul style="list-style-type: none"> ➤ Emotion detection of Tom & Jerry. ➤ COVID-19 Face-mask Detection. ➤ Worked on survey paper in existing face detection algorithms. 	Bhubaneswar, India
Dec 2020	Winter Research Intern JNU 2 weeks winter internship under Dr. Narinder Singh Sahni on Gaussian process.	New Delhi, India
Odd Sem 2019	Semester Project NISER Semester Project under Dr. Subhankar Mishra on Deep Learning. <ul style="list-style-type: none"> ➤ Worked on the paper on novel architecture QUARC, Quaternion multi-modal fusion for hate speech classification. ➤ IMDB Movie review classification using Deep Learning. ➤ Digit Recognition using Deep Learning. 	Bhubaneswar, India
May 2019 Jul 2019	Summer Research Intern JNU Summer research internship under Dr. Narinder Singh Sahni on Regression Analysis. <ul style="list-style-type: none"> ➤ Parametric Regression models ➤ Explored different simpler linear and non-linear parametric models arising from the five-point non-linear model used by the vendors to fit the concentration-absorbance curve of HbA1c(used in measurement of average sugar levels over a period of 3 months). 	New Delhi, India
Jun 2018	Summer Research Intern IIT HYDERABAD Summer internship under Dr. Narasimha on Introduction to Cryptography.	India
Jul 2017 May 2017	Summer Research Intern HARISH CHANDRA RESEARCH INSTITUTE (HRI) Summer internship under Prof. Kalyan Chakraborty on Group Theory.	Allahabad, India

WORKSHOPS & PROGRAMMES

2020	SciPy India 2020 ONLINE Conducted a 2 hour workshop with one of my batch-mates Deepak Kumar on "Object counting in an image via Object Detection and Marking"	
2017	SPIM HARISH CHANDRA RESEARCH INSTITUTE (HRI) Audited lectures of SPIM, 2017 held at HRI, Allahabad	Allahabad, India
2017	Mathematica NISER Attended two days workshop on Mathematica held at NISER, Bhubaneswar.	Bhubaneswar, India

ACTIVITIES

- › Currently working on novel methods for Neural Machine Translation on Low Resource Languages.
- › Other ML projects can be found on project section of my [LinkedIn](#) profile.
- › Gave a talk on 'Some results on q-series and polynomials and series of Bloch-Polya Type' at ANTS talk series, HRI, Allahabad.
- › Part of organising committee of Mathematics dept. for Open Day event (2019) held at NISER, Bhubaneswar.
- › Presented Tower of Hanoi for high school students in Open Day event (2018) held at NISER, Bhubaneswar.
- › Volunteered for Open Day event (2017) at NISER, Bhubaneswar.
- › Designed a game named "Pet Parasite War" explaining biological concept for BIOLUDO held at NISER, Bhubaneswar.
- › Analysed the winning strategy for the game "dots and boxes".
- › Analysed the revenue receipts of Chattisgarh for years 2005-2016 as economics project work

CLUBS & LABS

Dr. Subhankar Mishra's Lab (SMLAB)

Member

Mathematics Club

Member

LANGUAGE

- › English
- › Hindi
- › Magadhi

HOBBIES & GAMES

- › DOTA 2
- › Valorant
- › Table Tennis
- › Sketching