

# BHASKAR DHARIYAL

📍 Dublin, Ireland

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## Education

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### University College Dublin

*Doctor of Philosophy, Computer Science*

Jan 2020 – Dec 2023

*Dublin, Ireland*

### University Of Hyderabad

*Master of Technology, Artificial Intelligence*

Jul 2016 – Jun 2018

*Hyderabad, India*

## Technical Skills

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### Open-Source Contributions

Sktime, Aeon-toolkit, GluonTS

### Tools and Languages

Python, C, C++, Git, L<sup>A</sup>T<sub>E</sub>X, VSCode

### Quantitative Research

Machine Learning, Deep Learning, Time Series Analysis, NLP

### ML Models/Tools

Linear Regression, Logistic Regression, Decision Trees, Random Forest, Neural Networks, CNN, SVM, Bagging, Boosting; Scikit-Learn, pytorch, numpy

## Experience

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### VistaMilk SFI Research Centre

*PhD Researcher*

Jan 2020 – Dec 2023

*Dublin, Ireland*

- Published research on scalable multivariate time series classification in CORE A\*/A Conference like ECML, and ICDM.
- Developed statistical methods for handling data from sensors, IoT devices and perform classification using machine learning algorithms.
- Reduced computation time and memory required by 70%.
- Mentored an undergraduate student for a final-year project.

### Amazon Web Services (AWS)

*Applied Scientist II Intern*

Sep 2022 – Dec 2022

*Berlin, Germany*

- Developed a local machine learning model Rocket for time series forecasting.
- Contributions to AWS' open source time series forecasting library GluonTS.

### Ion Energy

*Machine Learning Engineer*

May 2019 — Dec 2019

*Mumbai, India*

- Actively engaged with battery engineers and developed machine learning model for battery's health prediction.
- Developed a POC on NASA battery ageing dataset.
- Interviewed and hired candidates for the machine learning team.

### Lumiq.ai

*Data Scientist*

Dec 2018 — Apr 2019

*Mumbai, India*

- Developed a POC using topic modelling and bag of words for an organisation to significantly improve the customer experience and answer queries in an automated manner
- Developed a machine learning based POC to predict the delinquency of customers on consumer durable product

## Projects & Publications

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### Time Series Publications | Python, Sktime, Aeon-toolkit

- **B Dhariyal**, TL Nguyen, G Ifrim; "Back to Basics: A Sanity Check on Modern Time Series Classification Algorithms", *In International Workshop on Advanced Analytics and Learning on Temporal Data (AALTD)*, ECML-PKDD, Springer, October 2023; **Ranking: CORE A**
- **B Dhariyal**, TL Nguyen, G Ifrim; "Scalable Classifier-Agnostic Channel Selection for Multivariate Time Series Classification", <https://doi.org/10.1007/s10618-022-00909-1> *Data Mining & Knowledge Discovery (Journal Track, ECML-PKDD, 2023, Turin, Italy)*; **Ranking: CORE A; IF: 4.8**
- **B Dhariyal**, TL Nguyen, G Ifrim; "Fast Channel Selection for Scalable Multivariate Time Series Classification" [https://doi.org/10.1007/978-3-030-91445-5\\_3](https://doi.org/10.1007/978-3-030-91445-5_3) *In International Workshop on Advanced Analytics and Learning on Temporal Data (AALTD)*, ECML-PKDD, Springer, October 2021; **Ranking: CORE A**
- **B Dhariyal**, TL Nguyen, S Gsponer, G Ifrim; "An Examination of the State-of-the-Art for Multivariate Time Series Classification." <https://doi.org/10.1109/ICDMW51313.2020.00042> *In International Workshop on Large-scale Industrial Time Series Analysis (LITSA)*, ICDM, IEEE, November 2020.; **Ranking: CORE A\***

## Sentiment Analysis Publications | *Python, CUDA, Keras, C, NLP, NLTK*

- **B Dhariyal**, V Ravi; "Word2Vec and Hybrid Deep Learning for Sentiment Analysis", [https://doi.org/10.1007/978-981-15-2475-2\\_1](https://doi.org/10.1007/978-981-15-2475-2_1)  
*International Conference on Soft Computing and Signal Processing, Springer, Hyderabad, India, June, 2019*
- **B Dhariyal**, V Ravi, K. Ravi; "Sentiment analysis via Doc2Vec and Convolutional Neural Network hybrids"  
<https://doi.org/10.1109/SSCI.2018.8628833>  
*In IEEE Symposium Series on Computational Intelligence, Bengaluru, India, Nov, 2018.*

## Miscellaneous Machine Learning Projects | *Python, Sklearn, Numpy, Pandas*

- M Frizzarin, G Visentin, A Ferragina, E Hayes, A Bevilacqua, **B Dhariyal**, et al.; "Classification of cow diet based on milk Mid Infrared Spectra: A data analysis competition at the "International Workshop on Spectroscopy and Chemometrics 2022" <https://doi.org/10.1016/j.chemolab.2023.104755>  
*Chemometrics and Intelligent Laboratory Systems (2023): 104755. IF: 4.2*
- M Frizzarin, A Bevilacqua, **B Dhariyal**, et al.; Mid infrared spectroscopy and milk quality traits: A data analysis competition at the "International Workshop on Spectroscopy and Chemometrics 2021";  
<https://doi.org/10.1016/j.chemolab.2021.104442>  
*Chemometrics and Intelligent Laboratory Systems (2021): 104442; IF: 4.2*
- R Pasunuri, V Venkaiah; **B Dhariyal**, "Ascending and Descending Order of Random Projections: Comparative Analysis of High-Dimensional Data Clustering: Theory and Applications", [https://doi.org/10.1007/978-981-13-0761-4\\_14](https://doi.org/10.1007/978-981-13-0761-4_14)  
*In 4th International Conference on Harmony Search, Soft Computing and Applications, Springer, Noida, India, February, 2018*

## Awards & Achievements

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- Winner of VistaMilk Data Challenge 2022.
- Runner up of VistaMilk Data Challenge 2019.
- Awarded SFI Scholarship for PhD studies.
- Awarded Scholarship for master's studies by All India Council for Technical Education (AICTE).
- Among top 5 percent out of 100000 students in Graduate Aptitude Test in Engineering exam.
- 1st Runner-up in Invesco Hackathon conducted on Data Science & Machine Learning.
- Awarded full tuition fee waiver scholarship for undergraduate studies.

## Activities

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- Presented work at LITSA@ICDM 2020, AALTD@ECML 2022, ECML@2023 .
- Poster presentation at Insight Plenary 2023, Galway, Ireland
- Delivered a lecture on the topic "Introduction to Data Science" at the Graphic Era University, India in July 2023.
- Reviewer:  
ECML 2021, 2022; AALTD@ECML 2021, 2022, 2023, EAAI Journal 2023
- Teaching:  
Machine Learning Autumn 2020, Autumn 2021  
Data Analytics Spring 2020, 2021, 2022, 2023
- Postgraduate Tutor at Computer Science Support Centre  
Academic Year 2021, 2022, 2023

## References

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- Assoc. Prof. Georgiana Ifrim  
University College Dublin, Ireland  
PhD Supervisor
- Prof. Vadlamani Ravi  
Institute for Development & Research in Banking Technology, India  
Master's Thesis Supervisor
- Dr. Tushar Semwal  
Senior Applied Scientist, Microsoft