Anwesha Mohanty, Ph.D Candidate

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Research Interests

- Image processing, Computer Vision, Machine Learning, Deep Learning, Data Augmentation, Generative Models, Optimization, Medical Image Analysis/Processing.

Education

2019 – 2023 **Ph.D., Dublin City University (DCU)** School of Computing.

2018 – 2019 **MSc by Research. Computer Vision, Dublin City University** School of Computing. Discontinued with this degree upon a PhD scholarship offer.

2015 – 2017 **Masters (M.Tech) Computer Science, Christ University, Bangalore, India** (With Distinction)
Thesis title: *A Rule Base Expert System to Assess Alcoholic Cirrhosis using Pattern Matching Techniques*.

2010 – 2014 **Bachelors (B.Tech) Computer Science, Biju Patnaik Institute of Technology, India** (With Distinction)

Honours and Awards

2019 – 2023 **Full 4 years Ph.D Scholarship** provided by Science Foundation of Ireland, Center of Research Training for Digitally Enhanced Reality (CRT-d-real).

2018 – 2020 **Full 2 years MSc by Research Scholarship Grant** by *Faculty of Engineering and Computing, DCU.*

2022 **Best Student Poster Presentation Award** at *33*rd Irish Signals and Systems Conference (ISSC2022).

Other Research Experience

May 2022 – July 2022 **PhD Research Intern - NHS England, Leeds, UK**

Sep 2019 – Mar 2021 **Visiting Research Student - Trinity College Dublin, Dublin, Ireland**

Work Experience

Feb 2017 – Jan 2018 **Research Engineer - Gostudio.in**

May 2016 **Intern - Aegaeon Technologies Pvt. Ltd, Mysore, Karnataka.**

Nov 2013 – Jan 2015 **Co-founder - FrameInn** - Key responsibilities include : Managing core activities of the company such as ideation, content writing, hiring content writers and developers; communicating with the international clients; managing social media and advertisement.

Teaching Experience

2018 – 2022

Total hours = 196 hours, School of Computing, Dublin City University
Responsibilities: ***Supervising the lab work/programming assignments, marking lab exams and reports.***

1. Academic year 2022-2023:
    - CA266 (Probability and Statistics), 24 hours, Fall 2022 (Semester 1).
      and **Guest Lecture on The application of Statistics** (BSc.)
2. Academic year 2021-2022:
    - CA266 (Probability and Statistics), 20 hours, Fall 2021 (Semester 1) (BSc.)
3. Academic year 2020-2021:
    - CA200 (Quantitative Analysis for Business Decisions), 9 hours, Fall 2020 (Semester 1)(Bsc.)
    - CA266 (Probability and Statistics), 20 hours, Fall 2020 (Semester 1) (BSc.)
    - CA660 (Statistical Data Analysis), 8 hours, Fall 2020 (Semester 1) (MSc.)
    - CA349 (IT Architecture), 18 hours, Fall 2020 (Semester 1) (Bsc.)
4. Academic year 2019-2020:
    - CA200 (Quantitative Analysis for Business Decisions), 24 hours, Fall 2019(Semester 1) (BSc.)
    - CA266 (Probability and Statistics), 24 hours, Spring 2020 (Semester 2) (Bsc.)
5. Academic year 2018-2019:
    - CA200 (Quantitative Analysis for Business Decisions), 22 hours, Fall 2018(Semester 1) (Bsc.)
    - CA266 (Probability and Statistics), 11 hours, Spring 2019 (Semester 2) (BSc.)
    - CA274 (Programming for Data Analysis), 33 hours, Spring 2019 (Semester 2)(BSc.)

Research Publications

Journal Articles

1. A. Mohanty, A. Sutherland, M. Bezbradica, and H. Javidnia, "Skin disease analysis with limited data in particular rosacea: A review and recommended framework," *IEEE Access*, vol. 10, pp. 39 045–39 068, 2022. DOI: 10.1109/ACCESS.2022.3165574.

Conference Proceedings

1. A. Mohanty, A. Sutherland, M. Bezbradica, and H. Javidnia, "Towards synthetic generation of clinical rosacea images with gan models," in *2022 33rd Irish Signals and Systems Conference (ISSC)*, 2022, pp. 1–5. DOI: 10.1109/ISSC55427.2022.9826207.
2. A. Mohanty and S. Shukla, "Different expert systems for disease diagnosis using artificial intelligence techniques: A review," in *National Conference on "Challenges and Opportunities in Computer Engineering"(NCCOCE)*, 2017, pp. 77–81.

In Preparation and Under Review

1. A. Mohanty, A. Sutherland, M. Bezbradica, and H. Javidnia, *High fidelity synthetic face generation for rosacea skin condition from limited data (submitted as a journal article).*

Skills

Languages	English (full professional proficiency), German (elementary proficiency), Hindi, Odia, Bengali, Sanskrit.
Programming Languages	Python, R, Vim, MATLAB, C++ , C, Java, Scala, HTML, PHP, LaTeX…
Frameworks/Libraries	CUDA, PyTorch, Tensorflow, Keras, Numpy, Pandas, Tableau, OpenCV, Git, …
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting, publishing, science communication.

Academic Training Courses (during PhD)

EE514	Data Analysis and Machine Learning
EE544	Computer Vision
CA660	Statistical Data Analysis
CA682	Data Management and Visualisation
GS608BS	Strategies for Academic Writing
LC600	English for Academic Purposes
GS601	Intellectual Property and Commercialisation
LC602	Advanced Writing Support
CA659	Mathematical Methods for Computational Science

Other Activities

09/2020 to 08/2021	**PhD Class Representative (FCR)** for Faculty of Engineering and Computing (Elected with the highest number of votes).
24/06/2021	Tell It Straight Competition **Finalist.**
25/07/2019	Selected as a Special Open Session **Presenter** in the **DeepLearn2019** Summer School.
07/03/2019	**Panel Member** on "Supporting women in Research" Panel Discussion.

References

1 **Dr Alistair Sutherland**, Dublin City University, email: alistair.sutherland@dcu.ie

2 **Dr Hossein Javidnia**, Dublin City University, email: hossein.javidnia@dcu.ie

3 **Dr Marija Bezbradica**, Dublin City University, email: marija.bezbradica@dcu.ie