

## ABHISHEK MANDAL

75, Pinewood Crescent, Glasnevin, Dublin 11, Ireland | Ph: 0833071283 | E mail: [mail.abhishek.mandal@gmail.com](mailto:mail.abhishek.mandal@gmail.com)

LinkedIn: <https://www.linkedin.com/in/abhishek-mandal-ds>

Github: <https://github.com/aibhishek>

### SUMMARY

I am a SFI funded PhD researcher at the Insight Centre for Data Analytics, supervised by Dr Suzanne Little of Dublin City University and Dr Susan Leavy at University College Dublin. My research focuses on auditing bias and imbalance in deep neural networks used in computer vision applications. My areas of interest include Convolutional Neural Networks, Generative Adversarial Networks, Deep Learning, Computer Vision, Multimedia Analytics and Ethics and Bias in AI.

### EDUCATION

Doctor of Philosophy, Artificial Intelligence Oct 2020 – Sep 2024  
Dublin City University and University College Dublin, Ireland (Joint PhD)  
Title: Auditing imbalance and bias in deep neural networks for multimedia content analytics

Master of Science, Data Science (1<sup>st</sup> Class Honours) Sep 2019 – Aug 2020  
Institute of Technology, Carlow, Ireland

Bachelor of Technology, Mechanical Engineering, (CGPA 7.92/10) July 2012 – May 2016  
Sikkim Manipal Institute of Technology, Sikkim, India

### TECHNICAL SKILLS

**Programming languages:** Java, Python, R, PL/SQL, HTML 5

**Artificial Intelligence Technologies:** TensorFlow, PyTorch, Keras, OpenCV, Pandas, Numpy, Sklearn, Scipy, Nvidia CUDA, Spyder, Jupyter, R Studio,

**Visualisation:** Ggplot, Matplotlib, Plotly, RShiny

**Databases:** Oracle 11, MySQL 8, MongoDB

**Frameworks:** SpringBoot, Spring MVC

**Cloud technologies:** Pivotal Cloud Foundry

**Tools:** Spring Tool Suite, Jenkins, Jira, Git, UDeploy, SoapUI, Sonarqube, Maven, BitBucket

**Operating Systems:** Windows 7, 10, Linux

### WORK EXPERIENCE

**Technology Fellow - <A+> Alliance for Inclusive Algorithms** Jan 2021 – June 2021

In collaboration with ThoughtWorks

- Collaborated on a project to develop an NLP based application to gain insights into United Nation conferences.
- Analysed gender and racial bias present in AI models.
- Conveyed research findings to the general public by means of blog posts.

**Data Scientist - Design+ Technology Gateway (Contract)** Sep 2020 – Nov 2020

Industry based research project under IT Carlow.

- Generated business insights from data for an insurance industry client.
- Created dashboards using Plotly, RShiny and Flexdashboard.
- Deployed the dashboards using Shinyapps.

**Software Engineer – Backend Java Developer (Cloud) - Capgemini India Pvt Ltd** Dec 2016 - May 2019

**Client: Synchrony Financial USA**

**Project: SYF-ECOM-SyPI** May 2017 – May 2019

- Developed cloud based backend technologies to migrate existing struts based banking application to microservice based architecture.

- Developed backend microservices and RESTful APIs using SpringBoot, wrote JUnit test cases using Mockito and deployed the microservices using Jenkins to PCF .
- Attended project related calls such as daily stand-up calls, technical calls, scrum calls etc.

as per Agile –Scrum methodology.

---

## **PUBLICATIONS**

### **Conferences**

- Abhishek Mandal, Susan Leavy, and Suzanne Little. 2021. Dataset Diversity: Measuring and Mitigating Geographical Bias in Image Search and Retrieval. In Proceedings of the 1st Int’l Workshop on Trustworthy AI for Multimedia Computing (Trustworth AI ’21), Oct. 24, 2021, Virtual Event, China. ACM, New York, NY, USA, 7 pages. <https://doi.org/10.1145/3475731.3484956>

### **Book Chapter**

- Mandal, A. (2021). The Algorithmic Origins of Bias. Feminist AI. Retrieved from <https://feministai.pubpub.org/pub/the-algorithmic-origins-of-bias>

---

## **CERTIFICATIONS**

- Oracle Certified Associate Java Programmer(OCAJP) Java 7
- Scrum Fundamentals Certified

---

## **AWARDS AND ACHIEVEMENTS**

- Awarded full PhD scholarship by Science Foundation Ireland worth € 120000.
- Awarded President’s Research Fellowship worth €10000 by Institute of Technology, Carlow.
- Awarded <A+> Alliance for Inclusive Algorithms Technology Fellowship worth CHF 12000.

---

## **REFEREES**

**Available on request.**