Narinder Kaur
N.kaur.1@research.gla.ac.uk

Cardiovascular Disease & Artificial Intelligence
Multidisciplinary Research

PROFESSIONAL PROFILE

A committed and passionate Precision Medicine Scientist and Clinical Researcher. Currently, seeking a diverse and intellectually stimulating position that will enable me to strengthen my innovation for solving clinical problems. Helping people is what inspires me to continue my career in this field.

WORK EXPERIENCE

July 2023 – May 2024: Precision Medicine Scientist – Hong Kong Metropolitan University (Hybrid)
- o   Leading innovative research in cardiovascular disease prevention, drug discovery and artificial intelligence
- o   Processing and transforming electronic medical records (EMRs) for clinical relevance
- o   Defining data strategy for multiple type 2 diabetes mellitus patient cohorts

October 2020 – April 2021: The Data Lab – University of Edinburgh: Data Scientist / Manager
- o   Working with clients to build a data strategy in AI for healthcare, energy and climate change
- o   Performing data analysis, machine learning and analytics in Python – Jupyter Notebook
- o   Database development for an industrial renewable energy project – PostgreSQL

December 2019 – September 2020: Hymans Robertson – Financial Technology: Data Scientist
- o   Leading data science project and introducing machine learning to the company
- o   Applying statistical techniques: correlations and bivariate analysis
- o   Implementing and testing several predictive machine learning models in R Studio
- o   Creating dashboards to present graphs and results in Microsoft Power BI

Machine Learning / AI Projects

Management and implementation of the following projects:

- o   Cardiovascular Drug Repurposing utilising Network Graph Analysis - Present
- o   Role of loop diuretics in type 2 diabetes mellitus: a machine-learning investigation - Present
- o   Precision Medicine Approach to Heart Failure Risk: Heart Failure Congress – May 2024 (Accepted)
- o   Type 2 Diabetes and Incident Heart Failure: British Society of Cardiology Congress June 2023 (Accepted)
- o   Predicting all-cause mortality in Type 2 Diabetes ESC General Congress – May 2023 (Accepted)
- o   Heart Failure Risk Prediction Models: ESC Heart Failure Congress – Jan 2023 (Accepted)
- o   Cost Prediction Model for Renewable Energy: Oct 2020 – Apr 2021 (The Data Lab)
- o   Predictive Analytics for Employee Wellbeing and Attrition: Jun 2020 – Sep 2020 (Hymans Roberson)
- o   IoT and Cloud based solution for Patient Monitoring System: Feb 2020 – May 2020 (Innovation)
- o   Risk Assessment Tool for IT Project Managers: Apr 2018 – Apr 2019 (Honours Research Project)

KEY SKILLS

- Proactive team player able to work on own initiative, clearly articulate ideas, positive attitude and reliable. Commitment to delivering the high standard work.

- Scientific problem solving and logical, yet compassionate approach to identifying solutions. Determination and diligence in every project undertaken.

- Mathematics; Statistics, probability distribution, multivariate & bivariate analysis, survival analysis and causal inference.

- Data Science; pre-processing, data exploration and transformation of longitudinal healthcare datasets. Creating industry standard data and artificial intelligence methodologies.

- Machine Learning & AI: supervised, unsupervised and semi-supervised learning algorithms (Neural Network architectures, SVMs, Decision Trees, Naïve Bayes & KNNs) and time-dependent risk modelling.

- Presenting and communicating research and results at large clinical & technical audiences, i.e. conferences and guest lectures.

- Maintain partnerships with industry and academia, ability to build strong collaborations with healthcare professionals.

- Producing high-impact publications for research team collaborations and creating high-level graphs to explain novel techniques.

EDUCATION & CERTIFICATIONS

2021 – Present: Final Year Precision Medicine PhD – The University of Edinburgh & Glasgow University
*Funded by the Medical Research Council

2019 – 2020: MSc Big Data Technologies – Distinction: Glasgow Caledonian University

2015 – 2019: BSc (Hons) Computer Science – Distinction: Glasgow Caledonian University

Epidemiology Training – Karolinska Institute, Sweden 2023
Scottish Informatics Computer Science Alliance Conference 2022: Best Research Poster Award
Cardiology Training: 2022
Precision Medicine Data Protection & GPR training: 2021
SAS Data Scientist-Practitioner: 2020
Data Science & AI Ethics: 2019
PRINCE2 Project Management Certification: 2019

VOLUNTARY WORK

Undergraduate & Postgraduate Mentoring: Present
- Mentoring Medical Doctors in statistics and machine learning.
- Teaching students how to approach an AI or software development project.

October 2018: Autism - Artlink Discovery Application: J.P Morgan, Code for Good: IT Project Manager
- Technologies: Django, JavaScript, Ajax, SQLite, Python
- Development of an autism charity web-application for careers to search for safe environments in Scotland.

*References available upon request.