

## Contact Information

---

Name: Arshad Muhammad Mehar  
Email: [Dm.Arshadmehar@gmail.com](mailto:Dm.Arshadmehar@gmail.com)

Mobile: +61 422 695 661  
Address: NSW 2195

## Professional Overview

---

- My professional experience includes more than Ten-years' as a Systems and Data Analyst/ and Nine-years' in teaching associate lecturer / lecturer roles with major educational institutions including the University of Sydney, University of Technology Sydney (UTS), Western Sydney University (WSU) and Edith Cowan University (ECU) as well as an involvement with diverse research projects related to sustainable energy and health sector.
- I am highly skilled and experienced in maintaining, extracting, manipulating, transforming, cleansing, importing, processing, analysing and visualising data; and conducting data mining and statistical analysis including via predictive models e.g. linear and multiple regressions, datasets & documents matching, clustering and classifications.
- Additional to my professional experience, I have extensive formal qualifications and technical skills and have had an involvement in several publications and presented at various conferences within Australia and overseas as detailed further in this document.
- I am now seeking new opportunities that align with my areas of expertise including (but not limited to) Statistics; Data Scientist; Machine Learning; Artificial Intelligence; Documents Matching; IT; and Research.

## Qualifications

---

### Doctorate of Philosophy PhD | Data Mining (Clustering) | 2010 - 2016

Western Sydney University School of Computing, Mathematics & Engineering | Sydney NSW

Thesis: Advances in Clustering Based in Inter Cluster Mapping

### Master of Information Technology | 2000 - 2001

Edith Cowan University | Perth WA

Key Subjects: Database Administration, Internet and Java Programming, Project 1 & Project 2, C++ Object Oriented and Software Design

### Graduate Diploma of Science in Computer Studies | 1998 - 1999

Edith Cowan University | Perth WA

Key Subjects: Database Design & Development, System Analysis & Design, Ada Language & Visual Programming

### Bachelor of Science (Mathematics and Statistics) | 1994 - 1997

Punjab University | Lahore Pakistan

Key Subjects: Calculus, Mathematical Methods and Statistics

## Areas of Expertise

---

- Data Science
- Statistics
- Statistical Decision Making
- Statistical Data Analysis
- Statistical Algorithms
- Business Statistics
- Social Web Analytics
- Actuarial Science
- Machine Learning
- Probability Theory
- Tertiary Teaching/Tutoring
- IT Systems Analyst/Developer
- Mathematics
- Big Data Technologies
- SQL Programming
- Forecasting
- Data Mining and Visualisation
- Database Design
- Data Management
- Data Modelling
- Data Cleansing and Quality
- Data Transformations
- Software Architecture
- Biostatistics

## Technical Skills

---

- SAS, Tableau, Python, R & RStudio software for statistical analysis.
- Big Data with Hadoop 2.x, Pig, Hive and Hbase.
- Eclipse IDE, Java JSP, Servlets, JDBC, HTML/CSS, JavaScript, Apache Tomcat and Ant.

- UNIX, Window, PL/SQL, Oracle 10g and MS SQL Server.

## **Research and Data Scientist Experience**

---

### **Agency for Clinical Innovation (ACI) | Chatswood NSW | 04/2019 – Current**

#### **Role:**

- Senior Data and Statistical Analyst | Data Quality and Integration | Data Cleansing | Data Validation & Visualization | Confidentiality Checks | SAS Programming | GIS Specialist.

#### **Project: Leading Better Value Care and Healthcare Neighborhoods**

- Conducted high quality, advanced analyses and provide interpretation.
  - Prepared data and statistical analyses required for economic team, development of resourcing strategies as required by the analytics manager.
  - Undertake multivariate analyses and linking data to determine health system wide impact of ACI projects.
  - Worked with team members to implement and ensure accuracy of information, interpretative analyses and presentation.
  - Handled and maintained sensitivity information, confidentiality check and suppress data.
  - Developed and maintained effective working relationships and communications with key internal and external stakeholders and work collaboratively.
  - Link strongly with the strategy and resources division to ensure consistent and credible analysis methods are utilised.
  - Prepared various documents including briefing papers, reports, related correspondence and responses and presented to different audiences including technical and non-technical background.
  - Provided timely, high level advice and support to analytics & senior managers.
- 

### **Australian Institute of Health and Welfare (AIHW) | Sydney NSW | 05/2018 – 03/2019**

#### **Role:**

- Senior Data Scientist | Data Analyst | Data Quality | Data Cleansing | Data Transformation | Tableau Data Visualization | Data Modeling & Prediction | SAS Programming | GIS Specialist.

#### **Project: Primary Healthcare Data Analysis (GP style Patients ED presentations and discharge)**

- Contributed to data quality assurance processes to ensure accuracy of performance information in reports and all associated materials.
  - Analysis, identify, and interpret trends or patterns in complex health related data sets.
  - Worked under limited direction with management to priorities research and information needs.
  - Understand and help clients to make a better business decision-making by transforming an ocean of data into streams of insights.
  - Provided advice on technical and administrative matters to senior managers.
  - Liaised with people both within and external to the AIHW.
  - Planned, organised and managed projects, including designing, researching, analysing and presenting information in various formats, and supporting relevant working groups and/or committees.
- 

### **Postdoctoral Fellow | University of Technology Sydney | Sydney NSW | 01/2017 - 11/2017**

#### **Role:**

- Data Scientist | Data Analyst | Data Quality | Data Cleansing | Data Transformation | Data Validation | Data Visualization | Dashboard | Data Modeling & Prediction | School of Software.

#### **Project: Retail Incidents Data Analysis**

- Analysis, cleaning Retail Incidents data to identify the areas, more incidents occur.
- Summaries and identify top (shoplifting, employee, theft, supplier fraud, organized crime and administrative errors) number of incidents.
- Project purpose was to reduce number of incidents and shrink cost.

#### **Project: Forecasting Energy Consumption**

- Investigated and identified the factors and group of consumers for their energy demand.
- Developed different statistical models for estimating average energy consumption of residents based on the factors of demographic and geographic location of residents.
- Created and summaries final report, and developed tool in excel spreadsheet.

- Project was aimed at enabling consumers to optimally use energy resources and reduce energy costs and to create an overall sustainable environment.
  - Project purpose was to make an informed decision about the selection of a solar energy panels and storage battery with sufficient capacity to meet the desired energy demand.
- 

## **Western Sydney University | Sydney NSW | 07/2010 – 11/2016**

### **Role:**

- Data Scientist | Data Analyst | Research Assistant | Data & Documents Matching | Mathematics, Statistics and IT Support.

### **Project:**

- Analysed, maintained and combined large hospitals datasets from the NSW health department.
- Investigated the medical expenditure survey data to find the health status and expenditure.
- Analysed data and generated reports with SAS program and Enterprise Miner.
- Extracted and processed data from tweets using R different packages e.g. Twitter API.
- Compared the methodologies and procedures for effective data analysis and improvement.
- Researched specific interest areas by conferring with experts, reviewing literature, identifying and addressing methodological issues, determining and running appropriate analyses and publications.

### **IT Computer Support Technician:**

- Installed, updated and configured operating systems, performed a review of the fixes and wrote impact assessments for any defects raised by the School stakeholders.

## **IT Systems Analyst/Designer Experience**

---

### **Systems Developer/Application Support**

**Dubai Islamic Bank | Islamabad Pakistan | 07/2008 – 10/2009**

#### **Core Activities:**

- Worked closely with internal stakeholders to identify and analyse complex and critical business process issues and gaps in the system.
  - Conducted mapping and modelling of workflow systems and processes.
  - Developed customer information and account management system according to the company needs.
  - Oversighted the implementation of new systems and conducted user acceptance testing.
  - Designed and maintained the database architecture to maintain accuracy of all data.
  - Developed user manuals/documentation for applications and trained and mentored new developers.
  - Communicated extensively with all users to ensure business requirements were met at all times.
  - Investigated root causes for application issues and troubleshoot and resolved any issues as required.
- 

### **Systems Analyst/Developer**

**Vision Education & Migration Services | Sydney NSW | 02/2006 – 12/2007**

#### **Core Activities:**

- Similar role to the previous, i.e. systems analysis and development/refinement of applications and also included providing customer application and web-based application support. Tools used included HTML, JavaScript, CSS, JSP, and SQL Server 7.

## **Teaching Experience**

---

**The University of Sydney | Sydney NSW | 01/2018 – 05/2018**

### **Subjects:**

- Coding Literacy (Java) | Artificial Intelligence.

### **Core Activities:**

- Assisted academic unit co-ordinators and chief examiners.
- Delivered lectures, workshops, tutorials, student consultation and assessment.
- Assisted and supervised with direction practical laboratory sessions.
- Contributed to course and team planning review processes through attendance at team meetings.

---

## **University of Technology | Sydney NSW | 01/2017 – 02/2018**

### **Subjects:**

- Enterprise Software Architecture| Data Analysis and Visualisation.

### **Core Activities:**

- Prepared activities to engage student interest and improve their understanding of concepts.
  - Conducted lectures and tutoring sessions.
  - Assisted students to build in strong knowledge via learning programs and assessed their progress.
  - Assisted students to gain a better understanding of their weak areas within a subject or as a whole.
- 

## **Western Sydney University | Sydney NSW | 07/2010 – 11/2016**

### **Subjects:**

- Database Design & Development | Statistical Decision Making | Data Mining & Visualisation | Health Informatics | Social Web Analytics | Introduction to IT.

### **Core Activities:**

- Planned program design and developed unit material.
  - Conducted lectures, tutorials, workshops and practical sessions (including facilitating laboratory and practice sessions).
  - Prepared students' progress reports, administered examinations, marked assignments and provided feedback to students.
  - Participated in faculty and academic meetings and assisted with enrolments and other administrative activities including database management and records keeping.
  - Travelled (e.g. to other campuses of the University).
- 

## **Edith Cowan University | Perth WA | 03/2003 – 11/2004**

### **Subjects:**

- Fundamentals of Software Engineering | Systems Analysis & Design | Internet & Java Programming | | Mathematics | Statistics | Visual Basis | Database Design & Development.

### **Core Activities:**

- Similar activities as per previous teaching roles and also included web site design by JSP, JAVA, J2EE, HTML, XML and supervising a software project in Database & Visual Basic.

### **Publications**

---

- Mehar, A. M., Gill, A. Q., & Matawie, K. (2018). 'Analytical Model for Residential Predicting Energy Consumption'. IEEE 20th Conference on Business Informatics, Vienna, Austria, vol. 2, pp. 82-88.
- Matawie, K., Mehar, A., Maeder, A. (2017). 'Optimal number of clusters based on inter cluster elements mapping'. Proceedings of the 32nd International Workshop on Statistical Modelling, vol. I, pp. 329-334.
- Matawie, K., Mehar Muhammad, A. and Maeder, A. (2015). 'An approach to determine clusters overlap for k-means clustering'. International Workshop on Statistical Modelling, Linz, Austria, vol. 2, pp. 163-166.
- Mehar Muhammad, A., Matawie, K. and Maeder, A. (2013). 'Determining an Optimal Value of K in K-means Clustering'. IEEE International Conference on Bioinformatics and Biomedicine, Shanghai, China, pp. 51-55.
- Mehar, A., Maeder, A., Matawie, K. and Ginige, A. (2010). 'Blended Clustering for Health Data Mining'. Takeda, H.(ed.) E-Health, Springer Berlin Heidelberg, 978-3-642-15515-5, pp. 130-137.

### **Conference/Seminars – Presentations & Attendance**

---

- Statistical Society of Australia Inc. | 2016
- Bioinformatics and Biomedicine China | 2013
- University Forum & Seminar | 2014, 2013, 2011
- World Computer Congress Australia | 2010

### **Referees**

---

On request.