

ADHARSH KIRTAN

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SUMMARY

PharmD student and **clinical data researcher** with experience in **biomedical signal analysis** and **disease risk modelling**. Co-author of a **Springer-indexed publication** (ICCCNet 2024) on EEG-based seizure detection (98.63% accuracy) and developer of a **diabetes risk prediction model in R** for early-risk stratification. Interested in applying **predictive modelling** and **health data analytics** to **public health surveillance** programs.

RESEARCH EXPERIENCE

Summer Research Intern, Western Ghats Nature Foundation **May 2026 - September 2026**

- Analysed **visitor behavioural patterns** and **mental health outcomes** in ecotherapy settings
- Evaluated **quantitative data** on nature exposure and psychological well-being
- Contributed to **research on non-clinical interventions in mental health**

EEG-Based Seizure Detection System, Springer Publication **October 2024 - May 2025**

- Presented in ICCCNet 2024, at **Manchester Metropolitan University**
- Developed a **real-time EEG-based seizure detection system** using Approximate Entropy modelling
- Achieved **98.63%** accuracy, **96.54%** sensitivity, and **97.85%** specificity
- **Demonstrated** potential for **early neurological event** detection and **real-time monitoring systems**

Summer Research Intern, SSN College of Engineering **April 2024 - May 2024**

- Researched and presented on **EEG in Cognitive Load Analysis**, examining neural responses during high-demand cognitive tasks.
- Analysed **EEG signals to assess cognitive workload** variations during high-demand tasks
- Gained hands-on experience in **biomedical signal processing and experimental data analysis**

PROJECTS

Diabetes Risk Prediction Model (R)

- Built a **predictive model for early risk identification** using clinical and lifestyle data
- Applied **statistical and ML techniques** for risk stratification
- Explored use in scalable NCD screening programs

Multi-Payer Framework for Rare Disease Access in India

- Analysed **access barriers for rare diseases** (NF1, aHUS, PNH)
- Proposed a **multi-payer financing framework** integrating public–private models
- Assessed implications for **health system design and equitable access**

Brain Fog: From COVID-19 to Chemotherapy to SSRIs

- Studied cognitive dysfunction across **oncological, and pharmacological contexts**
- Examined mechanisms including **neuroinflammation** and **drug-induced effects**
- Presented at *PharmaQuora 2026*

EDUCATION

Doctor of Pharmacy, Manipal College of Pharmaceutical Sciences, Manipal **Aug 2025 - Aug 2031**

- Coursework includes **pharmacotherapeutics**, **pathophysiology**, and **pharmacology**
- Focus on **neuropharmacology**, **diagnostics**, and patient-centred clinical research

High School Diploma, Peepal Prodigy School, Coimbatore **Jun 2023 - May 2025**

- Biology with Computer Science | CGPA: 9.0
- Active in **MUNs, debates, and academic competitions, representing international delegations in national conferences**
- Achieved **National Finalist in Indian Navy Quiz**
- Selected for **Level II/III national-level olympiads and heritage quizzes**
- Engaged in sports such as **Table Tennis** and **Chess**

POSITIONS HELD

- **Networking Representative,** ISPE - MAHE Chapter
  - Engage with global researchers in **pharmacoepidemiology** and **public health surveillance**
- **Head of Design,** MCOPS Editorial Board
  - Led **design** and **content** strategy for institutional publications
- **Graphic Design Associate,** Hult Prize MAHE Chapter
  - Contributed articles on science, society, and culture
- **Content Associate,** Manipal The Talk Network(MTTN)
  - Designed communication material for entrepreneurship initiatives

ADDITIONAL INFORMATION

- **Technical Skills**
  - **Programming:** Python, R
  - **Data Analysis:** MATLAB (Basics), Statistical Modelling, SQL
  - **Domains:** Biomedical Signal Processing, Disease Risk Modelling, Public Health Data

- **Languages:** English, Tamil, Telugu

- **Certifications**
  - **Antimicrobial Stewardship: Improving Clinical Outcomes by Optimization of Antibiotic Practices,** Stanford University School of Medicine
  - **Data Science and AI** *(8 week course),* Indian Institute of Technology - Madras
  - **Practical Biostatistics with R**

- **Awards/Recognitions**
  - **Springer-indexed publication at age 17** (ICCCNet 2024)
  - **Winner**, PharmaQuora Quiz (2026)
  - **Runner-Up**, Pharmacy Literacy Society Quiz (2026)
  - **Qualified**, NSEB-2024, NSEA-2024