

Pathan Abu Hurairah Rahman

✉ abuhurairahkhan1997@gmail.com | ☎ +44 7823704376

🌐 LinkedIn: www.linkedin.com/in/pathan-abu-hurairah-rahman-khan-825315249

Code availability: [Abu1997-Pathan/MSc-Bioinformatics-Project: Spatial Transcriptomics Knee Mouse Data](#)

📍 Liverpool, United Kingdom

Profile

MSc Bioinformatics candidate at the University of Liverpool with hands-on experience in spatial transcriptomics and multi-omics data analysis. Developed reproducible pipelines using Python and R; applied statistical modelling to benchmark tissue segmentation. Seeking analyst roles to apply biological insights to data-driven research in academia or biotech.

Education

University of Liverpool — MSc in Bioinformatics (2024 – 2025)

Modules: Biological Data Skills (R), Advanced Genomics, Coding for Life Sciences (Python), Informatics for Life Sciences, Computational Biology, Proteomics & Metabolomics, Research Skills & Project.

Sarvajani University — MSc in Medical Biotechnology (2021 – 2023) | CGPA: 8.5/10

Relevant Courses: Genetic Counselling, rDNA Technology, Bioinformatics.

Veer Narmad South Gujarat University — BSc in Biotechnology (2017 – 2020) | CGPA: 6.32/10

Food Tech, Dairy, Marine science, Environmental science, Plant Biotech, Animal Biotech, Micro Biotech, Microbiology.

📄 Research Project (MSc Bioinformatics)

“Optimising Integrated Image and Gene Expression grouping for Spatial Transcriptomics”

- Integrated Visium data in Python & R to perform unsupervised tissue classification.
- Benchmarked clustering outputs using biological relevance & statistical metrics (ARI Score = 0.50 in Leiden clustering method).
- Performed pathway enrichment and gene expression marker discovery (like Prg4 and Col10a1) for tissue annotation.
- Improved reproducibility via scripted workflows, version control and clear documentation.

📄 Technical Skills

- Programming: Python (Biopython, pandas), R (tidyverse, ggplot2, survival, DESeq2).
- Statistical Methods: Regression, PCA, ANOVA, Cox models, hypothesis testing.
- Omics Data Analysis: Genomics, transcriptomics, proteomics, metabolomics.
- Tools & Platforms: GitHub, Linux/WSL, MetaboAnalyst, Seurat, MEGA X, HPC clusters.
- Data Visualization: ggplot2, matplotlib, RMarkdown, PowerPoint.
- Databases & Tools: NCBI, BLAST, KEGG, HMDB, UniProt, Bioconductor.

Experience

Online Lecture Assistant | E.H. System of Medicines (2021 – 2024)

- **Taught** 30+ science lectures to cohorts of 10-15 medical students (cancer biology, immunology, obesity).
- **Increased** engagement by 40% via interactive tools, polls, and visual aids.
- **Authored** lecture notes and MCQs; aligned content with syllabus outcomes.
- **Coordinated** session logistics and Q&A for timely starts and consistent quality.

Lab Technician | Bharat Clinical Laboratories (2021)

- Conducted **100+ clinical assays** (including blood separation) and developed safety protocols that reduced sample handling errors by **15%**.
- **Streamlined** sample processing with three pathologists, reducing turnaround time by 20%.
- **Maintained** equipment, calibration records, and QA logs to support audits.
- **Enforced** biosafety and waste-disposal SOPs to ensure compliance and lab safety.

Private Tutor (Science & Maths) | Self-employed (2021 – 2023)

- **Achieved** 70% average grade improvement across 6+students through tailored instruction.
- **Designed** weekly study plans, practice sets, and topic-based mock tests.
- **Led** 1:1 and small-group sessions (2-4 students), tracking progress and attendance.
- **Communicated** progress to parents/guardians with concise updates and actions.

Certifications & Additional Skills

- **Epigeum Certifications:** Responsible Research Practice, Irresponsible Research Practices, and Data Selection & Analysis
- **Applied** Git version control for collaborative coding and workflow efficiency.
- **Designed** reproducible research pipelines in R Markdown and jupyter notebook for data analysis.
- **Implemented** genome annotation and phylogenetic tree reconstruction using MEGA X and BLAST.

Additional Experience & Soft Skills

- **Mentored** peers in coding support and troubleshooting during lab sessions.
- **Collaborated** across teams; **adapted** to shifting academic priorities.
- **Presented** complex concepts clearly to non-specialist audiences.