# Adel Almutairi

## MSc Bioinformatics | BSc Microbiology

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## Summary:

Motivated and detail-oriented Bioinformatician with an MSc in Bioinformatics from the University of Exeter and a BSc in Microbiology from King Saud University. Skilled in applying computational tools and statistical methods to solve biological questions, with hands-on experience in data collection and pre-processing, analyzing, and results presentation. Strong background in scripting with Python and R, and proficient in Linux command line. Demonstrated success in collaborative projects with academic and governmental institutions, including SFDA and KFSHRC. Awarded Second Place in Graduation Project Excellence from KSU, and trained in machine learning and essential programming. Adept at integrating biological insight with computational approaches to deliver actionable results.

#### **Education and Rewards:**

- Master of Sciences in Bioinformatics, University of Exeter, United Kingdom (2024).
- Bachelor of Sciences in Microbiology, King Saud University, Saudi Arabia (2022).
- Earned the Second Place Award in Graduation Project Excellence (2022).

## **Projects:**

- Metagenomics analysis of Saudi western vallies of plastic-degrading and biofilm forming bacteria (May, 2025).
- Methodology comparison in constructing phylogenetic trees between SNP-matrix phylogeny and core genome MSA phylogeny in publicly available Salmonella entirica serovar typhimurium isolates (SFDA, January 2025).
- Performed bacterial analyses for an MSc student in collaboration between King Saud University and SFDA, and two MSc students in collaboration with KFSHRC (December 2024).
- Performed analyses for the clostriduim outbreak, comparative analysis to trace back food poisoning original source (SFDA, November 2024).
- MSc project titled: The Detection of Transmembrane proteins in Giant Viruses and phylogenetic analysis using Bioinformatics.

### **Experience and Training:**

- Bioinformatics Specialist at Genalive (3rd August present)
- Supervised Machine Learning: Regression and Classification, DeepLearning.AI, Stanford, Coursera (Verify at: https://coursera.org/verify/0ZNW99LWHN3Q).
- Saudi Food and Drug Authority, Bioinformatics Researcher Volunteer (November 4th, 2024 Februrary 24th 2025, and April 20th-**present**).
- Unix Operating Systems Command Line Seminars, University of Exeter, Exeter, The United Kingdom (2024).

- Passed the program: Fundamental Skills in Bioinformatics, and the introductory series of workshops in total of 45 hours, KAUST (Coursera, Cred ID: 8BC3MIS95ZPS).
- Python Programming Essentials, Rice University (Coursera, Cred ID:1RXWF4O6TRDN).
- International English Language Testing System total score of 6.5 and a score of 7 in listening and reading sections (2023).

## Skills and Specialties:

- The command line of Unix/Linux proficiency.
- Github version control, Jupyter Notebook and Google Colab workflow writing.
- Utilization of Conda and Docker.
- Python programming, including Pandas and Numpy.
- R language data pre-processing, plotting, statistical analyses, and generating reports with Rmarkdown.
- Fundamental bioinformatics concepts such as sequence alignment, variant calling, population genomics, and phylogenomic analyses.
- Ability to use APIs to access public databases and tools.
- Next/Third generation sequencing awareness to optimize short/long reads workflows.
- Problem solving
- Biostatistics, including t-test, and PCA.
- Genomic evoultion and population genetics, such as genetic drift, and natural selection.