



Drug Resistance Prediction using WGS data

Hackathon Attendee Name (Abhinav Sharma)

Institution (Liverpool John Moores University)



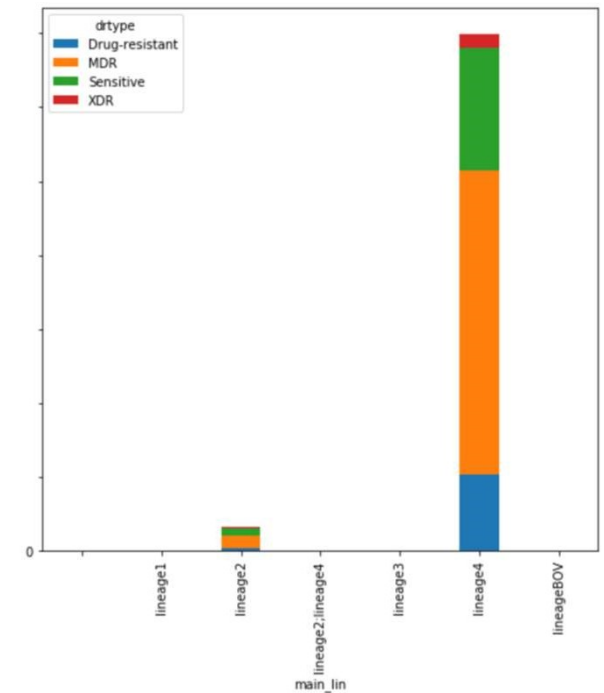
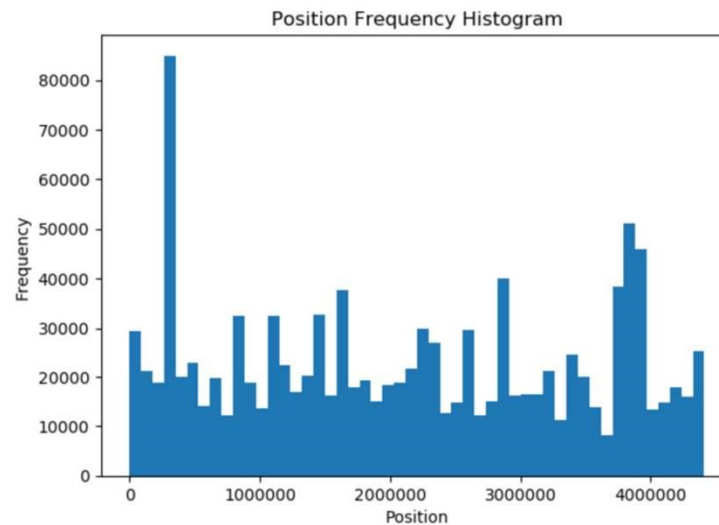
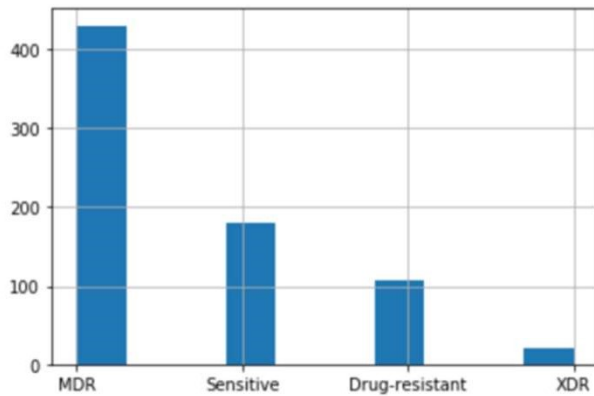
About the Project and the Team

- The project is vital towards the rapid identification and control of TB in a cost-effective manner.
- Cost of WGS has drastically reduced over the years and it is now possible to predict characteristics of a pathogen using WGS; it also paves the way towards individualized and precision medicine.
- The project was proposed and lead by Abhinav Sharma (abhi18av@outlook.com)
- Edourd, Davis and James, volunteered and contributed substantially.



Data Visualization

- Edourd and Davis have worked on Data Visualization for the available WGS samples and their Drug Resistance profiles.



Feature Engineering

- James and Abhinav have worked on establishing the foundation for the machine learning algorithm.
- The feature matrix for the ML algorithm is based on the Single Nucleotide Polymorphism (SNPs), which are observed from the variant calling analysis.

	isResistant	NC000962_3.11
SRR10851707	0	0
SRR3732596	0	0
ERR751356	1	0
ERR751456	1	0
ERR751482	1	0

5 rows × 134257 columns





Thank you!

