INSHA LAKHANI

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EDUCATION

School of Engineering & Applied Science, **University of Pennsylvania** May 2025
Bachelor of Science in Engineering in **Networked and Social Systems Engineering** | Minors: Political Science, Design
Relevant Coursework: Data Structures & Algorithms, Computer Systems*, Probability, Statistical Computing, Mathematical Foundations of Computer Science, Programming Languages and Techniques, Game Theory, Data Analytics for the Business Economy, Calculus III
Clubs/Activities: Penn Atma, PIT@Penn

Dhirubhai Ambani International School May 2021
Honors: Academic Excellence Award, Subject Achievement Awards (all subjects), Lifelong Learner Award, IBDP World Topper
Clubs/Activities: Model UN Club (President), Student Government (House Representative), Student Arts and Open Mic Association

WORK EXPERIENCE

NBC Decision Desk, **Data Analytics Fellow** Aug 2022–Present
- Designed internal software to automate ETL pipeline for 23 states' election results, using RSelenium to scrape government databases.
- Assisted NBC Universal's Decision Desk to pre-process and prepare live election results from the 2022 U.S. primary elections.
- Developed analysis tools to improve exit poll-based predictive models for Dr. Stephen Pettigrew's upcoming paper on voter turnout.

Program on Opinion Research and Election Studies, **Data Analytics Fellow** May 2022–July 2022
- Architected data pipeline for research analysis of states' shapefiles, using webscrapers to collect information from online databases.
- Merged past and present voting data to forecast future ballot counts, using party history, statistical methods, and clustering.
- Analyzed impact of proposed re-districting plans by re-partitioning existing voting data to predict voting behavior in upcoming elections.

Ministry of Environment and Protocol, Maharashtra, **Research and Policy Fellow** Sep 2021–May 2022
- Responsible for creating visualizations for government reports and press releases using Tabelau, SQL, and R.
- Focused on learning how to write and analyze policy papers, and press releases under Mr. Saurabh Punamiya, Chief Research and Policy Secretary to the Minister
- Used R to analyze over 10 years of electoral data, specifically on a project that looked at a district-wise comparison in Delhi and Mumbai to analyze if voting trends were affected by novel infrastructure projects in both cities.

Project Safal Shuruvat, **Unilever India**, **CSR Department**, **Analytics Volunteer** Jan 2022–Present
- Conducted a pivot-based analysis for data slicing and separated full and consistent listener cohorts by geography/telecom circles that helped the project team make mid-course corrections using a surround and engage strategy, bringing non-opt-in users into our fold
- Analyzed how gender-based biases affect response time to different content, optimum message length and calling time.
- Saw a 14.5% increase in vaccination rates after the third phase.

RELATED EXPERIENCE

FIRST Mentor, Ex-Head Outreach Team 7539, FIRST Robotics Competition Jan 2021–Present
- Mentored 4 FIRST Technical Challenge teams, with 2 teams qualifying for the All-India Nationals.
- Founded SHE empowers STEM, a program focused on introducing STEM to women with over 15 skillshare events organized to teach basic OOP programming and robot design to children and mid-career women alike.
- Instructed and facilitated collaborative learning-based Java, Scratch and EV3 Lego Programming workshops in 5 different public schools targeted towards primary and middle school children.
- Organised over 1000+ hours of outreach events over 2 years for students, teachers and government agencies relating to STEM advocacy.

SELECTED PROJECTS

How India (would have) voted (Election Modelling Project for ML Best practices) Dec 2021–Feb 2022
- Used census demographic data to model the 2019 General Election.
- Built a k-NN model using 17 features and generalized India's electoral race to be between two main coalitions.
- Optimised prediction to achieve a validation accuracy to 77%.

TEDxTalk View Predictor Dec 2021
- Developed classification algorithm to predict categories for a speech given a plaintext script and basic model features.
- Built an interactive GUI for viewing estimated view totals for user-generated speeches, using RShiny to perform estimations.
- Analyzed data to author final report on correlation between a speech's features and its performance at TEDx events.

Nepotism Analysis Oct 2021
- Designed interactive software to view relationships between Bollywood's top actors and their connections within the industry.
- Developed statistical methods to model the connected-ness of actors, using family history and shared performances.
- Co-authored final report on the efficacy of using network models to analyze movie stars' reliance on nepotism.

SKILLS & INTERESTS

Languages: Java, R, OCaml, SQL, HTML, CSS
Technologies: Flask, Node.js, Google Cloud Platform, Git, Linux, AWS, MongoDB
Interests: Political Science, Data Science, Election Predictions, Trader Joe's frozen foods aisle