

Shantanu Solanki

Champaign, Illinois

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EDUCATION

University of Illinois, Urbana-Champaign, Illinois

Aug 2021 - May 2023

Master of Science, Statistics

GPA 4.0/4.0

Indian Institute of Technology, Dhanbad, India

July 2011 - May 2015

Bachelor of Technology, Engineering

GPA 3.5/4.0

RELEVANT COURSEWORK

Data Structures and Algorithms, Mathematical Statistics, Statistical Learning, Applied Regression and Design, Python for Data Science, Data Science Foundations, Database Systems, Natural Language Processing, Unsupervised Learning, Applied Bayesian Analysis

SKILLS

- **Statistical Learning:** Random Forest, XGBoost, Bootstrapping, Hypothesis Testing, PCA, Clustering, Generative Models, NLP, Time Series Modeling, Visualization, A/B Testing, Deep Learning, Recommendation System, Linear regression, GLMs
- **Programming:** Python (Pandas, Numpy, Tensorflow, Keras, Sklearn, Matplotlib, Plotly, etc.), R, C++, JavaScript, Spark, Hadoop
- **Database, Visualization, Web Dev Technologies:** MySQL, MongoDB, Neo4j, Tableau, Power BI, GCP, Django, HTML, Git, AWS

WORK EXPERIENCE

University of Illinois, Urbana-Champaign, Illinois

Aug 2022 - Present

Research Assistant, ETC Lab, Department of Applied Health Sciences, College of Liberal Arts and Sciences

- Created a master markdown file to transform raw survey data into actionable dataset, reducing time of preparation by **50%**.
- Employed SEM to predict vital signs at several time points with/without specific interventions with **95%** accuracy.
- Built a React web app to register survey responses of participants significantly cutting down survey time from **months** to **days**.

University of Illinois, Urbana-Champaign, Illinois

Jan 2022 - May 2022

Graduate Teaching Assistant, Department of Astronomy, College of Liberal Arts and Sciences

- Explained concepts of Astronomy to around **200** students and held office hours, discussion sessions to reinforce learning.

Ministry of Labor and Employment, Government of India, New Delhi, India

May 2018 - July 2021

Data Scientist, Central Secretariat Services

- Unemployment Profiling on Labour Bureau's data (EUS 2019):
 - Analyzed demographics data to predict unemployment trend at city, state and individual level using **Decision Trees, Logistic Regression, SVM**, etc. attaining an **AUROC** of **67%**.
 - Identified the prominent factors for youth unemployment and resultant monetary deprivation using **logistic** and **linear** regression respectively, boosting the cause for targeted government spending which resulted in raising the overall employability of youth from **45.9%** in 2019 to **50.3%** in 2022.
- Created a dashboard using **Power BI** to monitor the workforce of EPFO, a subordinate social security organization, displaying the strengths of all the regional offices across the nation to make employee transfer procedures fair and transparent.

IITian's Hub (Higher Secondary Educational Institute), Dhanbad, India

June 2015 - March 2018

Data Scientist

- Created a practice question recommendation system for students on the e-learning platform using **cosine similarity**.
- Built a subscription prediction model for the marketing team to send targeted emails/offers thus leading to higher conversion ratio (**30% revenue growth**) with significantly lower costs.

ACADEMIC PROJECTS

Fashion MNIST Image Classification:

Python

- Employed several supervised and unsupervised learning algorithms on Fashion MNIST dataset.
- Attained an accuracy of **91.53%** in classifying images using stacking of models, viz. **SVM, Random Forest, KNN** and **Light GBM**.

Ukraine-Russia War Tweets Retweet Proneness Prediction:

Python, Spark

- Performed analysis on the twitter data using **NLP** to predict the retweet proneness of a tweet.
- Attained an accuracy of **87%** in classifying tweets as per their retweet proneness.

COVID-19 US Data Tracker:

Python

- Built an interactive dashboard using Plotly dash to visualise COVID-19 data of different US states and counties.
- Simplified data visualization of large COVID-19 datasets using a handful of inputs to reach insightful conclusions.

e-Commerce Database Interface:

React, JS, MySQL

- Designed an interface for updating a database of e-commerce products, using advanced SQL queries.
- Optimized query performance using different types of indexing.

HONORS AND ASSOCIATIONS

- Featured, as a Teaching Assistant, in the list of Teachers ranked as Excellent at the University of Illinois.
- Volunteered for the Non-Governmental Organization (Kartavya), working for the education of under-privileged kids in slums.