SAUMYA SINGH
Email | Portfolio | Linkedin | Github

EDUCATION

***NORTHWESTERN UNIVERSITY* | United States** September 2021 - December 2022
Masters of Science in Artificial Intelligence *GPA* - **4.00/4.00**

- *Teaching Assistant in AI/Ml for MBA 448 (Winter Quarter)*
- *Relevant Coursework: Intro to AI, Machine Learning, Data Science Seminar, Frameworks of AI, Deep Learning, Human-Computer Interaction, Natural Language Processing, and Knowledge Representation and Reasoning.*

FEROZE GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY August 2016 - September 2020
Bachelor of Technology, Computer Science *CGPA **9.1 / 10***

- *Relevant Coursework: Operating System, Data Structures, Natural Language Processing, Database Management System*
- *Secured the 2nd prize in Web-bit twice (2nd year and third year), and web development competition, and stood 3rd in the InterZonal Coding Competition.*

EXPERIENCE

***Tata Consultancy Services* | Associate System Engineer** February 2021 – August 2021

- Worked closely and interacted with different client companies like Eli Lilly to provide a quantitative perspective on GECMS(Global Engineering Content Management System) application in the Life Sciences sector.
- Led the comprehensive workforce planning and served as a Database Administrator for different Service Requests/RITM on ServiceNow, Autodesk, Kneat, Ergopoint, and TCS-Fume.
- Implemented SQL to update the Production server used by more than 40,000+ users to store the AutoCAD designs.

***Euprime* | AI Researcher** October 2020 – January 2021

- Led a collaborative research project with an Artificial Intelligence team of 4 to develop machine learning models for Healthcare solutions by analyzing the facial features of 0.7 Million health records.
- Iterated through several machine learning techniques to provide healthcare solutions and increase the accuracy by 4% in the current working model.

***Verzeo* | AI Researcher** February 2020 - May 2020

- Developed a product to collect customer feedback from the website of Verzeo and classify them into macro-level sectors using **BERT**-base, uncased architecture as encoder. An abstractive summary of the feedback is generated by implementing **LSTM** based sequence-to-sequence (seq2seq) model with an attention mechanism increasing efficiency across all verticals of Verzeo.

PROJECTS

***Diagnostic screening of genetic syndrome using Facial Landmark recognition* | Northwestern University, IL** November 2021- Present

- Collaborating with fellow researchers and developers to develop a vision product for earlier diagnosis of Congenital central hypoventilation syndrome(CCHS) and apnea among using facial landmarking of 2M premature infants.

Sudan Food Crisis* | *AWS Disaster Management Hackaton February 2022

- Developed machine learning solutions to classify food security crisis factors in South Sudan caused by weather conditions, conflict, agriculture, etc. Implemented **Random Forests** to achieve an **F1-score** of **92%.** Created route decision-making utilizing Google Maps by implementing **T-NER**(Transformer-based Named Entity Recognition) to identify locations embedded in the help messages and find a route. Also, implemented a pretrained **AutoModelForSequenceClassification** model to identify messages/news that denotes urgency during a disaster/mishap.

***Invisible Institute's Citizen Police Data Project* | Northwestern University, IL** September 2021- December 2021

- Partnered with the Invisible Institute to glean insights from Chicago Police Department data. Implemented PostgreSQL for database management, Trifacta for data integration/cleaning, Tableau and D3.js for visualizations, Scikit-Learn for logistic regression, and NLTK for **NLP** sentiment analysis and Topic Modelling using **LDA** on the summaries of complaint reports and Tactical Response Report.

***Sign Language Translator* | Northwestern University, IL** September 2021- December 2021

- Developed an American Sign Language translator with a maximum accuracy of 96% using several ML algorithms such as Neural Network(95.8%), Random Forests(95.0%), SVM(90.8%), KNN(79.7%), and Multinomial Logistic Regression(78.1%), and Naive Bayes(61.7%) on the Leap Motion Controller ASL dataset.

PUBLICATION

Stability in Differential Equations- Mathematics Research paper published at International Journal of Scientific and Engineering Research (IJSER) in Volume 11, Issue 10 2020 Edition. Issn- 2229 5518.
The paper uses the diagonal matrices to calculate solutions for first-order ordinary differential equations by using eigenvalues and eigenvectors. The benefit of this approach is reduced manual calculations compared to the traditional linear basis system.

TECHNICAL SKILLS

Languages: Java, Python, C++,C, R, HTML, CSS, JavaScript, SQL
ML/Deep Learning Frameworks and Libraries: Scikit-learn, NumPy, Pandas, Matplotlib, TensorFlow, PyTorch
Data Science: NLTK, Spacy
Tools and Technologies: Anaconda, Eclipse, Git, PostgreSQL

LEADERSHIP AND AWARDS

- Co-functioning of a startup "**Junior Master**" a platform to introduce students to python, machine learning, and artificial intelligence at an early age. Created the website using HTML, CSS, and Bootstrap.
- Selected in the top 1% for the coding round of Amazon Development Centre, India(Top 8 from 35,000+ participants).
- Campus Ambassador of P-Tech program, conducted several AI and Machine Learning Workshops across the country.