



# SWETA KESUR

MACHINE LEARNING SOFTWARE ENGINEER

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## EDUCATION

**MS CIT Specialization in Natural Language Processing | Purdue University, West Lafayette**

*Thesis: Identifying differences in the grooming Strategies & Stages using state-of-the-art methods.*

Aug 2021 - Aug 2023

GPA: 3.94/4.0

**B.TECH (Honours) | Nirma Institute of Technology, Ahmedabad**

*Information Technology, University topper in last year with GPA: 9.3/10*

Jun 2012 - May 2016

CGPA: 8.2/10

## EXPERIENCE

**Research Assistant | Purdue University, West Lafayette**

Multilingual Chat Analysis (sensitive data): Built a classifier using state-of-the-art methods to identify the differences in grooming stages and strategies of online sexual solicitors targeting minors, and helping Law Enforcement Officers in the training process who engage in online sex stings. Actively being used by Law Enforcement Officers.

Jan 2022 - Present

Indiana, US

**Software Engineer | Graduate Assistant | Purdue University, West Lafayette**

Build PL/SQL procedures and new PHP webpages for performing various processes related to the Graduate School Database running in Oracle.

Aug 2021 - Present

Indiana, US

**Machine Learning Software Engineer & Founder | Miemaw Global**

Built housing price predictive algorithm for Smart City Surat Municipal Corporation. (Active use)  
Created Reformer based chatbot and finetuned it based on clients requirement. (Active use)  
Built Waste Segregation Application for SMC funded by Goldman Sachs. (Active soon)  
Served AI applications to more than 150 happy clients throughout India.

Jun 2016 - Aug 2021

Surat, India

**Research Summer Intern | Fordham University, Bronx**

Built CNN to identify cancerous cells in MRI with 95% accuracy.

May 2015 - Jul 2015

New York, US

## TECHNICAL SKILLS

**Area of Interest:** Natural Language Processing, Full-stack Design & Development, Data Analytics

**Languages and Frameworks:** Python, Java, PHP, JavaScript, SQL, MySQL, SQLite, C/C++, HTML/CSS, Node.js, PL/SQL, Spring, Angular, React, Jenkins, Spark

**Tools and Libraries:** Kubernetes, Docker, Oracle SQL Developer, Heroku, Django, Git, Postgres, spacy, scikit-learn, NumPy, pandas, TensorFlow, NLTK-lib, Pytorch, Trax

**Certifications:**

- Natural Language Processing with Attention Models by DeepLearning.AI
- Natural Language Processing with Sequence Models by DeepLearning.AI
- Natural Language Processing with Probabilistic Models by DeepLearning.AI
- Natural Language Processing with Classification and Vector Spaces by DeepLearning.AI
- Finetune BERT for Text Classification by Coursera
- Natural Language Processing by HSE University @Coursera

Mar 2022

Mar 2022

Mar 2022

Jan 2022

Dec 2022

Oct 2020

- Machine Learning by DeepLearning.AI
- Front-End Web UI Frameworks and Tools: Bootstrap 4 by Coursera
- Image and Video Processing: From Mars to Hollywood with a Stop at the Hospital by Coursera

Oct 2020  
Aug 2020  
Mar 2015

## PROJECTS & RESEARCH

AI conversational chatbot creation using a Reformer Model ( <b>Active Research Work</b> )- <i>Building a model that can generate dialogues on initial grooming stages between offender-victim.</i>	Present
Anonymizing Legal Documents using Named Entity Recognition (NER) - <i>Built LSTM model to identify sensitive data and anonymize it using general tags like PER, ORG, etc. tags with 92% accuracy.</i>	Feb 2021
Question Answering using T5 Model – <i>Built a system that can answers questions regarding our Machine Learning University Coursework.</i>	Dec 2021
Transformer Summarizer - <i>Implemented the transformer decoder from scratch to summarize articles and deployed Machine Learning application on Cloud Platform.</i>	Oct 2021
English-to-German neural machine translator (NMT) model using Long Short-Term Memory (LSTM) networks with attention - <i>Built the NMT model from scratch using Trax. Generated translations using greedy and Minimum Bayes Risk (MBR) decoding.</i>	Sep 2021

## CONFERENCE & PUBLICATION

Generating Friendship forming grooming stage dialogues using transformer based architecture. <i>ACM Journal of Artificial Intelligence Research</i>	In press
Assessing differences in grooming stages and strategies among victim, LEO, and decoy with offender - <i>IEEE International Conference on Systems, Man and Cybernetics (SMC)</i>	In press

## AWARDS

Global Summit 2021 Womennovator Face Asia Awards (For being a founder of Top AI company in Asia)	Dec 2021
Womennovator Face 2020 in Startup Category	Feb 2020
Goldman Sachs 10KW Business Growth Fellowship	Nov 2019
Young Entrepreneur of the Year Award	Oct 2019
Pride of Gujarat by the Prime Minister Office of India.	Feb 2017
Ranked first in NU-Hackathon.	Feb 2014
Certificate of Honour for Paper presentation and publication in an international conference at Jawaharlal Nehru University (JNU), New Delhi.	Oct 2014

## HOBBIES

**Painting** – National level winner in painting

**Playing Guitar** – Can play it at a beginner level

## ORGANIZATIONS

**Purdue Association of Information Technology Professionals** – Purdue University.  
**Computer Society of India** – Nirma Institute of Technology

**Goldman Sachs 10000 Women Alumni** – Goldman Sachs.  
**Surat Smart City iLab** – Surat Municipal Corporation.

**Applied Knowledge Representation and Natural Language Understanding Lab** – Purdue University.