

Tamanna Ananna

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EDUCATION

Columbia University

New York, NY

MS in Computer Science, Machine Learning Track

2022

Teaching Assistant, Natural Language Processing (NLP), Fall 2021.

Courses include: Machine Learning, Deep Learning System Optimization, NLP, Spoken Language Processing

Columbia University

New York, NY

MS Bridge to Computer Science, GPA 3.9

May 2020 - May 2021

Courses include: Intro to CS, Algorithms and Data Structures, Systems Programming in C, Databases.

Princeton University

Princeton, NJ

BSE in Chemical and Biological Engineering, Cum laude

September 2014- June 2018

Awards: Reiner G Stoll Fellowship, top research award granted to one student in the dept.

EXPERIENCE

Machine Learning Researcher

New York, NY

Columbia University, Professor Zhou Yu

August 2021 - Present

- Investigating ways to improve object detection by grounding images with natural language explanations.
- Categorizing sources of noise in dialogue datasets and evaluating its impact on conversational AI models.

Data Scientist

New York, NY

Rolux Watch USA

November 2019 - May 2021

- Led the US team in a global project to improve operational efficiency in the watch repair process. Introduced new KPIs and updated data monitoring systems, reducing lead time by 15%.
- Owled data quality and reporting of a division and oversaw migration into cloud-based Azure synapse services. Re-designed and implemented data model in SQL for use in all downstream reporting and analysis, improving data refresh frequency from once/day to every 15 mins.
- Created 20+ reports on PowerBI that refreshed automatically by connecting it to the new data system. Trained end-users on new data model, reports and dashboards.

Business Data Analyst

Stamford, CT

Precision Xtract

August 2018 - November 2019

- Improved the back-end algorithm in R for discerning health insurance payer, leading to 30% increase in precision.
- Transformed the project into a data-refining product, servicing over 7 pharmaceutical companies with \$1.2 million in annual revenue. Trained and led a 3 person team that became responsible for maintaining the product.

PROJECTS

English to Spanish Translator

github.com/tamanna-a/translate-to-spanish

- Processed dataset, tokenized input, and trained a custom Encoder-Decoder Seq-2-Seq model in PyTorch and GPU that takes in English sentences and returns Spanish translation. Includes a front-end through Flask framework.
→ PyTorch, Python, GCP.

Vocab Game

github.com/tamanna-a/vocab-game

- Created a web-based game that tests user's spanish vocabulary. Features user authentication that also tracks user performance and provides feedback.
→ Flask, HTML, CSS, SQL

Emotion Recognition in Speech

github.com/tamanna-a/speech-sentiment-classifier

- Classifies human speech audio into 15 categories of emotions by extracting prosodic features like pitch, intensity, harmonicity, and etc.
- Achieves accuracy of 31% with a multilayer perceptron architecture and leave-one-out cross validation.

SKILLS

- Software:** Proficient: Python, Java, SQL, NoSQL, C, HTML, R | Knowledgeable: CSS, Javascript, Express Js, Microsoft Azure.
- ML:** Proficient: Pytorch, TensorFlow, Scikit-Learn, Pandas, Numpy | Knowledgeable: Google Cloud Platform, Kubeflow.
- Other:** Fluent in English, Bengali, Spanish. Beginner French. Organizer of conference with 500+ attendees.