

Aziza Mirsaidova

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EDUCATION

- **Northwestern University** Evanston, IL
Master of Science in Artificial Intelligence, GPA: 4.00/4.00 Expected December 2022
- **Middle Tennessee State University** Murfreesboro, TN
Bachelor of Business Administration in Finance and Data Science, GPA: 3.5/4.00 August 2017 - May 2021

TECHNICAL SKILLS

Languages: Python, R, C++, SQL [MySQL, PostgreSQL]

Frameworks and Libraries: PyTorch, TensorFlow, Pandas, Numpy, Matplotlib, NLTK, Plotly, Scikit-Learn

Skills: Data Science, Machine and Deep Learning, Speech Recognition, Natural Language Processing, Optimization

EXPERIENCE

- **Adobe** Remote
Machine Learning Engineer Intern September 2022 - Present
 - **Classification:** Developing a robust classifier to predict buying intentions based on user behavior by analyzing customer characteristics and attributes with historical purchase records to optimize Customer Data Platform.
- **Tiilt Lab: Technological Innovations for Inclusive Learning and Teaching** Evanston, IL
Graduate Research Assistant November 2021 - Present
 - **Speech recognition:** Building multi channel source separation model using **Transformer** architecture and **Pytorch** by reducing the word error rate for more than 4% to optimize speech recognition process for Blinc platform.
 - **NLP:** Developing topic models using **Principle Component Analysis** and **BERT** by extracting keywords and topics discussed during the conversation to better understand context and dynamics of the conversation.
- **University of Washington, eScience Institute** Seattle, WA
Data Science Intern June 2022 - August 2022
 - **Database Design:** Designed database schema and deployed new end-to-end database system using **SQL** and **Python** for Self Sufficiency Standard data.
 - **Time Complexity Reduction:** Optimized data insertion and retrieval process time by over 75%, now requiring only 30 minutes from the previous 3-5 hours. Solution adopted by the department moving forward.
 - **SSS Package:** Developed and released open source Python library to hold Self Sufficiency database.
- **Middle Tennessee State University** Murfreesboro, TN
Undergraduate Research Assistant December 2019 - May 2021
 - **Data Science:** Automated data pipeline processes and built multiple dashboards for tracking Tennessee economy in real-time leveraging Census data using Python and Tableau.
 - **Publication:** Arik, M., Riley, J., **Mirsaidova, A.**, Sumaiya, M. (2021). Shifts in Family Businesses Due to the Covid-19 Pandemic. Global Journal of Entrepreneurship, 153.

PROJECTS

- **Abstractive Text Summarization:** Fine-tuned **T5 transfer learning model** to summarize CNN/DailyMail dataset and achieved a ROUGE score of 44%.
- **Conversational Agent:** Implemented Conversational Agent using Transformer's **GPT-2** for text generation on MultiWOZ 2.2 dataset by fine-tuning decoding methods as Beam Search, Top-K Sampling, Temperature Sampling.
- **Fake and True News Generation:** Fine-tuned LIAR dataset on **GPT-Neo** for text generation to distinguish the differences between machine generated fake bots with accurate information.
- **Linguistic Evaluation of News:** Built Named Entity Recognition model to linguistically evaluate differences between machine-generated and real news using **NLTK**, **Transformer** models.

LEADERSHIP

- **Graduate Teaching Assistant:**
 - **MSAI 348 Intro to Artificial Intelligence:** Mentoring about 40 students in machine learning topics. (Fall 2022)
 - **MBAI 417 Data and Data Intensive Systems:** Designed the course lab and homework assignments. (Winter 2022)
- **CodePath:** Technical Interview Prep Mentor for Data Structure and Algorithm questions. (Summer 2022)
- **The Code It! Challenge EvanSTEM:** Mentored Evanston middle school students to code Arcade game. (Fall 2021)