ADITI MISHRA

Tempe, AZ
https://aditi96.github.io ⋄ (+1) 4808684360 ⋄ amishr45@asu.edu

EDUCATION

Arizona State University *June 2019 - Present*
Doctor of Philosophy (PhD) *Current GPA: 3.81/4*
Major: Computer Science *Expected Graduation: May, 2024*

International Institute of Information Technology - Bhubaneswar *August 2014 - May 2018*
Bachelor of Technology (BTech). CGPA: 8.53/10
Major: Computer Science and Engineering

COURSES TAKEN

Artificial Intelligence, Semantic Web Mining, Data Mining, Natural Language Processing, Statistical Machine Learning, Human Computer Interaction,Data Visualisation, Fundamentals of Statistical Learning, Social Media Mining and others

TECHNICAL STRENGTHS

Languages	Python, R, C, C++, MySQL
Web Technologies	D3.js, JavaScript, JSON, NodeJS, HTML, CSS
Machine Learning Frameworks	Scikit-Learn, Tensorflow, Keras Pandas, TramineR, NLTK
Tools	Tableau, Gephi, MATLAB, Git

RESEARCH

- **Mishra, A.**, Soni, U., Huang, J., Bryan, C. Why? Why not? When? Visual Explanations of Agent Behavior in Reinforcement Learning. (2021) *In Proceedings of Pacific Visualization Symposium (PacificVis), 2022* **(link)**
- **Mishra, A.**, Ginjpalli, S., Bryan, C. News Kaleidoscope: Visual Investigation of Coverage Diversity in News Event Reporting. (2020) *In Proceedings of Pacific Visualization Symposium (PacificVis), 2022* **(link)**
- Zhao, J., Xu, S., Chandrasegaran, S., Bryan, C., Du, F., **Mishra, A.**, Qian, X., Li. Y., Ma, K.-L. (2021). ChartStory: Automated Partitioning, Layout, and Captioning of Charts into Comic-Style Narratives. IEEE Transactions on Visualization and Computer Graphics (2021). **(link)**
- Bryan, C., **Mishra, A.**, Shidara, H., & Ma, K.-L. (2020). Analyzing Gaze Behavior for Text-embellished Narrative Visualizations under Different Task Scenarios. Visual Informatics, 4(3), 4150. **(link)**
- Huang, J., **Mishra, A.**, Arunkumar, A., & Bryan, C. (2020). TotemFinder: A Visual Analytics Approach for Image-based Key Players Identification. In 2019 IEEE Conference on Visual Analytics Science and Technology (VAST). **VAST Challenge 2019 Honorable Mention**.
- **Mishra, A.**, Hazarika, S., Biswas, A., ,Bryan, C. News Filling the Void: Deep Learning-based Reconstruction of Sampled Spatiotemporal Scientific Simulation Data. (2021) *Under review*

WORK EXPERIENCE

ASU Sonoran Visualization Lab - *Research Assistant* *Aug 2019 - Present*
Advisor: Dr Chris Bryan

- Currently working on providing visual explanations of inexplicable agent behaviour for domain experts working with autonomous agents trained using Reinforcement Learning.
- Developed a full stack system with trained RL agents using TensorFlow and Python in backed and the front end interface created using D3.js.

Los Alamos National Lab - *Summer Research Intern* *June 2020 - August 2020*
Advisor: Dr Ayan Biswas

- Built a deep learning model to reconstruct large unstructured scientific datasets and performed various quality and performance based experiments to evaluate the same.

IIT - Guwahati - *Summer Research Intern* *May 2017 - July 2017*
Advisor: Dr Gaurav Trivedi

- Simulated N-Body simulation and visualized the same in the junior year of undergraduate.

ASU *Jan 2019 - May 2019*

- Grader for course CSE 310 - Advanced Data Structures

ACADEMIC PROJECTS

Quora Insincere Questions Classification *Jan 2019-May 2019*

- Built machine learning models to perform supervised classification to identify insincere questions on Quora.
- Extracted features from the dataset to be fed into the Machine Learning models (SVM (Linear and RBF Kernel), Logistic Regression, Neural Nets, Naive Bayes, Decision Tree, Adaboost, Random Forest.) and performed comparative analysis based on accuracy, F1 score and recall.

Pearl 2.0, Emotional Analysis using Twitter Data *Sept 2018-Nov 2018*

- Built an interface to visualize emotions of a person by interacting with peers on Twitter.
- Extracted tweets of a user using Twitter API and applied sentiment analysis using NRC and ANEW lexicon library.
- Made a stacked stream flow chart, a ribbon chart and a map visualization using D3.js to demonstrate the effect of interaction and geographical position in emotions displayed on social media.

Detecting bots on social media *Sept 2018-Nov 2018*

- Used data mining techniques to detect bots which create unnecessary internet traffic, spread fake news and diffuse false information on Twitter
- Identified features such as geo-location, number of followers and followees, sentiments, frequency of tweets and used machine learning models on them to classify as a bot or not a bot.

Denoising Autoencoders and Stacked Autoencoders *Sept 2018-Nov 2018*

- Created autoencoders and stacked autoencoders from scratch and used it to measure different levels of denoising abilities on different amounts of noise in MNIST and Fashion MNIST data.

AWARDS AND OTHER ACHIEVEMENTS

SCAI Doctoral Fellowship, ASU *2022*
Grace Hopper Scholar - Orlando, Florida *2019*