Saurav varaprasad

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EDUCATION

Boston University, Boston, MA   05/2023
Master of Science —Artificial Intelligence
GPA : 3.88/4.0
Indian Institute of Technology - Hyderabad, Hyderabad, India   05/2020
Bachelor of Technology —Engineering Sciences
GPA : 7.77/10

PUBLICATIONS

Fusion Approaches to Predict Post-Stroke Aphasia Severity from Multimodal Neuroimaging Data
Saurav Chennuri, Sha Lai, Anne Billot, Maria Varkanitsa, Emily Braun, Archana Venkataraman, Janusz Konrad, Swathi Kiran, Prakash Ishwar, Margrit Betke;
Published at **ICCV** Workshop **Computer Vision for Automated Medical Diagnosis, 2023.**

Feature Analysis and Extraction for Post-Stroke Aphasia Recovery Prediction
Saurav Chennuri, Anne Billot, Sha Lai, Prakash Ishwar, Margrit Betke, Swathi Kiran;
Published in **Medical Imaging Understanding Analysis Conference, 2022.**

Towards Fast Crash-Consistent Cluster Checkpointing
Andrew Wood, Moshek Hershcovitch, Ilias Ennmouri, Weiyu Zong, **Saurav Chennuri**, Sarei Cohen, Swaminathan Sundararaman, Daniel Waddington, Peter Chin.
Published in **IEEE conference on High Performance Extreme Computing, 2022.**

Sloshing Noise Classification in Fuel Tanks of Hybrid Vehicles using Convolution Neural Networks.
Golla Siva Teja, **Chennuri Saurav Vara Prasad**, B. Venkatesham, K Sri Rama Murthy.
Published in the **Journal of Acoustic Society of America, 2021.**

SKILLS

Interests: Data Mining, Language and Vision, Reinforcement Learning.
Cloud Services: Google Cloud, AWS cloud services, Snowflake.
Languages: Python, C++, Shell Scripting, Java, MySQL, FORTRAN.
Machine Learning: Pytorch, Pytorch Lightning, TensorFlow, TensorBoard, Wandb, Transformers, Pandas, scikit-learn.
Tech Stack: Docker, Tableau, PowerBI, DeepLabCut, Github, Kubernetes, Terraform, LSF, Linux(Ubuntu 16.04/20.04, MacOS), Github, GitLab, Jira, MATLAB,
Certifications: Snowflake Snowpro Core, CITI Human Subjects Protection Training: Social and Behavioral Focus.
Courses: Deep Learning, Computer Vision, Natural Language Processing, Operating Systems, Databases, Statistics, Probability.

SELECTED PROJECTS

Gender Bias Quantification from Knowledge Graphs: Employed Poincaré disk model embedding of hyperbolic spaces to store large knowledge graphs of Names and Occupations in different languages to quantify gender biases.
Low Resource Language News Article Genre Classification: Implemented a contrastive training approach to enhance Chichewa language embedding, leveraging an English language dataset; aligned embedding using mT5(small) LLM for Chichewa and VADER for English, achieving a 64% classification accuracy.
Manipulating SGD from Data Ordering Attacks: Implemented a series of sophisticated attacks utilizing batch order poisoning and backdooring techniques on SGD to intentionally impair the performance of deep learning models. The approaches were successful in reducing the classification accuracy of Vision transformers and ResNets by 30-90% in the task of classifying CIFAR-10 images, employing different attacking policies.
Bayesian Optimization to speed up Gravitational data analysis: Improved the gravitational data analysis using Bayesian Optimization instead of Particle Swarm Optimization, reducing processing time for diverse celestial objects data by 20%.

Fractal Analytics, Bangalore, India   09/2020 – 08/2021

Artificial Intelligence startup with 2500+ employees and valued at $750 million.

Imagineer - Data Engineering division

- Created several intents and their corresponding responses in making a chatbot using Google DialogFlow Enterprise. Deployed webhook service to fetch the corresponding data from google BigQuery database at the backend to the DialogFlow interface. This application helped in reducing customer support response time.
- Contributed to end-to-end implementation of PowerBI dashboards for cross-functional teams, enabling real-time tracking of key performance indicators and facilitating data-driven decision making, resulting in an increase in overall efficiency.

Takenaka Corporation, Tokyo, Japan   05/2019 – 07/2019

A well established 400 year old Japanese architectural firm. Valued at more than 1 billion dollars.

Machine Learning Engineer Intern - Information and Communication Technology (ICT) group

- Developed an ensemble model by leveraging Xgboost, SVMs and Random Forests to predict the required workforce per day through the construction duration for diverse construction projects, achieving a variance of 10 workers per day.
- Delivered comprehensive presentations to explain the observations to many cross-functional stake-holders to understand the impact of the work.

ACADEMIC EXPERIENCE

Research Assistant, Center for Brain Recovery, Boston, MA   01/2023 – 05/2023
Academic Teaching Assistant, Boston University, Boston, MA   09/2021 – 06/2022

- Made course material and conducted lab sessions for different Computer Science courses for more than 140 students in each class. **Courses taught**: Computer Systems, Computational Tools for Data Science, Introduction to Computer Science.