Piyush Hinduja

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EDUCATION

The University of Utah, *Salt Lake City, Utah* **GPA: 3.9/4.0**
Master of Science (MS): Computer Science *August 2023 - May 2025 (Expected)*
University of Mumbai, *Bandra, India* **CGPA: 9.54/10.0**
Bachelors in Engineering (BE): Computer Engineering *July 2019 - May 2023*

SKILLS

Programming Languages: Python, Java, JavaScript, C, *C++, Kotlin, Dart, SQL*
Libraries: NumPy, Pandas, Scikit-Learn, Matplotlib, PyTorch, Tensorflow, HuggingFace, PySpark, OpenCV
Web Development: HTML, XML, CSS, JavaScript, NodeJS, ReactJS
Cloud/Tools: CloudLab, Version Control, Docker, MS Suite, AWS, OverLeaf, JIRA, API development
Data Structures and Algorithms: Trees, Linked Lists, Hashmap, Recursion, DP, Searching & Sorting

WORK EXPERIENCE

Data Analyst | The University of Utah*, Salt Lake City, Utah* *March 2024 - Present*

- Architecting a model to **track changes in 10-K filings** over time, analyzing forward-looking intensity, document length, and financial tone based on insights from **Muslu et al.'s 2015** study.
- Achieved a 27% increase in forward-looking statement identification by **improving data preprocessing** and **reducing per-filing processing time by 40%**.
- Implementing **AI-driven analysis** by prompting ChatGPT, comparing AI-generated outputs against manually coded algorithms to measure performance and efficiency.
- Expanding work to include similar analysis on **10-Q and 8-K filings and conference calls**, aiming to **broaden the scope of financial analysis** and improve real-time insights.

Machine Learning Researcher | FLUX Research Group, *Salt Lake City, Utah* *August 2024 - Present*

- Collaborating with a research team to **design and implement a deep learning model** that aims to **preprocess raw data for optimized GPU processing**, projected to improve training efficiency by up to 30%.
- Leveraging the **Distributed PyTorch** framework and **CloudLab's distributed machine** environment to scale neural network training across multiple nodes, expecting **training time to reduce by 75%**.

Full Stack Developer Intern | Exposys Data Labs, *Banglore, India* *June 2021 - July 2021*

- Led to a **tourism project**'s successful launch by integrating key features that enhanced **user-experience** and delivered valuable information about **50+ travel destinations in India**.
- Utilized **MERN stack** for an efficient frontend and backend integration, creating a **responsive, user-friendly interface** and enabling content management.

PROJECTS

Road Damage Detection and Classification *Object-Detection, YOLOv5, FasterRCNN* *GitHub Link*

- Collaborated with a team of four to develop a road damage detection system using **YOLOv5** and **FasterRCNN**, integrating a user-friendly web interface (deployed via **Streamlit**), leveraging the **RDD-2020 dataset**.
- Achieved model accuracies of **52.67%** with YOLOv5 and **44.45%** with FasterRCNN by training and **fine-tuning** on different hyper-parameters.
- The system plays a vital role, delivering a **70% improvement in road damage detection accuracy** over manual methods, helping **lower the frequency of accidents and fatalities**.

Dependency Parser *PyTorch, GloVe Embeddings* *GitHub Link*

- Streamlined a Transition based Dependency parser, using PyTorch, inspired by "A Fast and Accurate Dependency Parser using Neural Networks" (**Chen and Manning, 2014**), decreasing the computational complexity by **33%**.
- Fine-tuned the model and tried **four GloVe embedding sets**, achieving a **UAS (Unlabeled Attachment Score) of 0.76** and **LAS (Labeled Attachment Score) of 0.705**.

Pizzeria *Web Development, MERN* *GitHub Link*

- Designed a **pizza ordering web application** featuring live order updates, personalized carts, favorite pizza options, and an integrated chat feature for **real-time customer-store communication**.
- Utilized a tech stack including **HTML5, CSS, JavaScript, Node.js, Express.js,** and libraries such as **Socket.io** for real-time updates and **Passport** for secure authentication.