PRIYA KULKARNI

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EDUCATION

- ***Master of Computer Science***, University of Texas at Arlington - GPA: **4.0** **May 2024**
  (*Machine Learning, Data Mining, Artificial Intelligence, Big data & Cloud Computing, Python Programming, Database systems and other courses)*
- ***Bachelor of Computer Science and Engineering***, Visvesvaraya Technological University, GPA: **9.13** **Jul 2021**

SKILLS

Data Analysis and Visualization	: Advanced Excel, Tableau
Programming Languages	: Python (NumPy, Pandas, Matplotlib, Seaborn, Scikit learn), Java (Object-Oriented Programming)
Web Development	: HTML, CSS, Bootstrap, JavaScript, PHP, WordPress
Tools/Frameworks/IDE	: Scikit-learn, Visual studio code, Anaconda (Jupyter Notebook), GitHub, Eclipse, Oracle
Database / Cloud	: SQL, AWS (S3, lambda, Redshift), Databricks

WORK EXPERIENCE

Graduate Teaching Assistant, University of Texas at Arlington, *TX, US* ***Aug 2023 – Present***

- Enhanced CSE 5335 - **Web Data Management** course through engaging instruction, thorough grading, and **hands-on project guidance**, resulting in a remarkable 20% enhancement in overall student performance.
- Demonstrated expertise in **HTML5**, **JavaScript, HTML**, and **CSS,** effectively nurturing a **30% increase** in student proficiency levels.

Engineering Intern, Aspen Technology, *Houston, TX, US* ***May 2023 – Aug 2023***

- Elevated ML system performance by integrating new **AI/ML features**, optimizing **feature selection** using extensive industry data, resulting in **a 25% increase** in accuracy.
- Extracted and processed **data for analysis** using **Python, Jupyter Notebook**, and leading libraries (**Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn**), ensuring data cleanliness and integrity.
- Developed **impactful visualizations** to convey insights, and formulated, assessed, and validated **predictive models** and **machine learning algorithms**, driving actionable decision-making.

Assistant System Engineer, Tata Consultancy Services, *Bangalore, India* ***Aug 2021 – Aug 2022***

- Specialized in banking domains such as Loans & Cash Pool, significantly enhancing **system efficiency by 2**0% through proficient utilization of **IBM mainframe development, Java,** and **MySQL** technologies within **Agile SDLC** frameworks.
- Illustrated mastery in system functionality, change management, and Agile SDLC, applying **Java, MySQL, Cobol programming, JCL**, and **DB2 mainframe** technologies.

Web Development Intern, ClearExam, *New Delhi, India* ***Nov 2020 – Jan 2021***

- Constructed and maintained websites and software applications, prioritizing **UI design, cross-browser compatibility**, and adherence to web standards. Crafted compelling website content with **HTML5, CSS, JavaScript, PHP, and WordPress**, leading to a **25%** increase in user engagement metrics.

PROJECTS

Large Scale Linear Regression – Tools: Scala, Databricks, Spark, Hadoop Map-Reduce ***Oct 2023- Dec 2023***

- Engineered a closed-form solution for large datasets in **linear regression,** leveraging **RDDs**. Executed **gradient descent** updates, initializing parameters, computing summands, and achieving a **15%** decrease in RMSE.
- Tested the solution on example RDDs, running for 5 iterations, demonstrating expertise in **distributed computing** and **optimization techniques**

NBA Player Position Classification – Tools: Python, NumPy, pandas, Matplotlib, sklearn ***Sep 2023 – Oct 2023***

- Implemented an NBA player position classification model utilizing **MLP Classifier** on the 2020-21 NBA season dataset, achieving high accuracy through strategic **feature selection**, integration of domain knowledge, NULL value handling, and **cross-validation.**
- Showcased a comprehensive approach, including the application of a **confusion matrix** to ensure robust results with an achieved accuracy of 80%.

TF-IDF based Search Engine – Tools: Python, NLTK, Data mining ***Aug 2023 – Sept 2023***

- Designed and implemented a toy "search engine" in **Python** for processing a corpus on US Inaugural Addresses dataset, achieving a **90% accuracy** rate.
- Developed functionality to generate **TF-IDF vectors** for documents and identify the document with the **highest cosine similarity score** for a given query, utilizing **NLTK, a natural language processing toolkit** for Python.

Hierarchical Clustering for Seed Categorization – Tools: Python, NumPy, pandas, Matplotlib, sklearn ***Apr 2023 – May 2023***

- Executed **Hierarchical Clustering** on UCI seed dataset, using cluster IDs for **K-nearest neighbor classifier**, with an average **silhouette** score of 0.80.
- Employed **multiple clustering techniques**, determining the optimal number of clusters, and **addressed similarity measures** between clusters and data points, optimizing clustering performance by 20%.

Online Clothes Shopping – Tools: Oracle MySQL, Java, RDBMS ***Aug 2022 – Dec 2022***

- Displayed expertise in **database design** by crafting an **ER/EER model** including min-max identification and **relation mapping**, resulting in a 30% improvement in query optimization.
- **Applied SQL skills** to implement and execute **efficient CRUD** (Create, Read, Update, Delete) operations on the database, ensuring seamless data management and integrity, leading to **a 25% reduction in query execution time**

Early Prediction of Sepsis – Machine Learning – Tools: Python, HTML, CSS, Google Colab ***Mar 2021 – Jul 2021***

- Created a **Python**-based system to create an early warning & therapeutic decision support system, reducing sepsis-associated hospital mortality rates by 15%**.**
- Utilized **Bagging** and **Boosting** techniques, employing 50 **decision trees** to aggregate predictions and refine outcomes, thereby **enhancing accuracy** by 25%.

CERTIFICATIONS

- **LinkedIn :** Certified in Data Engineering Foundations(Jan 2024), SQL for Data Analysis (Jan 2024), Applied Machine Learning: Foundations (Mar 2021), Artificial Intelligence Foundations: Machine Learning (Mar 2021), Fundamental Data Analysis and Visualization Tools in Python (Jan 2024)
- **Spoken Tutorial Project, IIT Bombay** : Certified in C (Nov 2018), Cpp (Nov 2018), Java (May 2019), Python (Nov 2020), HTML & CSS(Jan 2021).