UTKARSH AVADHUT DABHOLKAR

Rochester, New York | +1(734)8907592 | dabholkarutk@gmail.com | LinkedIn | GitHub | Huggingface

Education

Master of Science in Data Science   Aug 2022 - May 2024
Rochester Institute of Technology, Rochester, NY   *GPA: 3.8/4*
Relevant Coursework: Foundations of Data Science and Analytics, Applied Statistics,
Database Design and Implementation, Visual Analytics, Software Engineering For Data Science, NLP, NoSQL

Bachelor of Technology in Computer Science and Engineering   Aug 2017 - May 2021
Manipal University Jaipur   *GPA: 7.0/10.0*

Competencies

- **Programming:** Python, Java, R, MySQL, SQL, HTML, C, solidity, Mongodb, Xml.
- **Data Visualization:** Matplotlib, Seaborn, Tableau, PowerBi, Dash, Plotly, Shiny, ggplot2.
- **Data Analysis:** Pandas, NumPy, MsExcel, Beautiful-soup, Scrapy.
- **Data Science Frameworks:** TensorFlow, PyTorch, Sklearn, py-caret, Neo4js, spark, Language Models (BERT, GPT, RAG).
- **AWS Tools:** AWS IoT Core, AWS Quicksight, AWS Redshift, AWS SageMaker, AWS Lambda Functions, AWS S3 Buckets.
- **Tools:** Git, Latex, Tableau, R-studios, Jupyter Notebook, Linux, Power BI.

Professional Experience

Graduate Teaching Assistant[SWEN-352, ISTE-732, ISTE-730]   Jul 2023 - Present
Rochester Institute of Technology, Rochester, New York

- Spearheaded the Creation and Execution of Interactive In-Class Lab.
- Mentored 20+ students across various tech domains including data analytics, software testing, and IoT.

Research Assistant   Jul 2020 – Dec 2021
Manipal University Jaipur, Jaipur, India

- Created a blockchain-based credit transfer ecosystem for schools and colleges, reducing processing time by 30%.
- Designed and implemented a novel model architecture to improve efficiency.

Data Science Summer Intern   Apr 2018 – Jul 2018
Verzeo, Bangalore, India

- Uncovered actionable insights from client data using Python and Power BI, enhancing data-driven decision-making by 20%.
- Optimized ML workflows using Pycaret and Dash, improving model accuracy by 15% and reducing development time.
- Used SQL to modify and extract data required, enhancing data accessibility and efficiency.

Projects

Compact Text Summarizer: Advancing Efficiency in NLP (Transformers, HuggingFace)   Dec 2023

- Pioneered the fine-tuning and transfer learning process to develop a compact T5-small model, achieving state-of-the-art abstractive text summarization on the SAMSum Dialogue Dataset.
- Enhanced model efficiency, achieving ROUGE-1 of 0.3767, ROUGE-2 of 0.1596, ROUGE-L of 0.2896, and a Cosine Similarity score of 0.7698, marking a 10% improvement over previous models.
- Facilitated community access by deploying a computationally sustainable T5-small model on Hugging Face, fostering evaluation, and widespread utilization.

Visualizing the Residents of Engagement Ohio (Data Visualization, Plotly Dash)   Mar 2023

- Developed an interactive dashboard to explore the demographics and daily routines of 1000 residents using Plotly Dash.
- Showcased population movement patterns using map visualization and time-based animation, providing valuable insights into daily routines and behavior.
- Revealed correlations between education, job skills, and income levels, emphasizing the importance of education and skill development in achieving higher income levels.

Image Forgery Detection using Metadata and Deep Learning (Python, CNN)   Dec 2021

- Reduced false positive rates by 20% and achieved a precision score of 85% in image forgery detection using a multi-level model.
- Trained a CNN model on a 10k image dataset, improving detection accuracy.
- Modified the input layer of MobileNetv2 to increase detection sensitivity for YCbCr images.

Publications

Blockchain Ecosystem for Credit Transfer in Education (Hindawi Journal)   09 Dec 2021

Certifications

- IBM Data Science specialization [9 courses] including a capstone project.
- Deeplearning.Ai Natural Language Processing Specialization [4 courses]