Ritwik Prasad

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Education

University of Wisconsin – Madison, USA   **Aug 2019 – May 2023**
- Bachelor of Science in Computer Science and Economics
- **Honors and Activities:** Dean's List Spring 2020, Spring 2021; Captain, Boxing Club UW Madison
- **Relevant Coursework:**
  - **Computer Science:** Machine Learning, Software Engineering, Data Visualization, Databases, Algorithms
  - **Economics:** Big Data Analysis, Econometrics, Markets and Models, Statistics in Economics, Finance
  - **Mathematics:** Linear Algebra, Discrete Mathematics, Statistics with R, Calculus I and II

Skills

Programming Languages: C++, Python, Java, HTML, CSS, SQL
Libraries: Django, pandas, Scikit-learn, Spark, PyTorch, TensorFlow, Matplotlib, Seaborn, React.js, Node.js
Other: VS Code, Jupyter, Linux, Docker, MongoDB, Tableau, Excel, Microsoft Azure, AWS, Agile

Work Experience

Adobe, Remote, *Data Science Research Intern*   **Jun 2022 – Aug 2022**
- Acquired and analyzed 10 million tweets, images, and replies from **Twitter API** from 3500 twitter handles.
- Acquired 27 million ads from **Meta Ads Library** for demographic, geographic and complex network analysis.
- Optimized speed and efficiency of data acquisition process by 80% using multithreading and **pySpark**.
- Enabled collaboration within department of researchers on dataset through Amazon Web Services.
- Developed an ETL pipeline to store a database for analysis using Google's **BERT** and **CLIP** models.
- Trained 2 versions of OpenAI's CLIP using this database – from scratch and from pretrained checkpoints.
- **Skills:** Deep Learning, NLP, AWS, Spark, Data Engineering, PyTorch, MS Excel

Software Training for Students, UW Madison, *Software Trainer (Part Time)*   **Aug 2021 – May 2023**
- Hosted multiple workshops on introduction to programming, Python, HTML for over 50 students.
- Increased enrollment in workshops by 15% through sponsored events with the Economics department.
- Designed and published a workshop on Intro to **VS Code for University**, including a web-hosted manual created using HTML and CSS.

Informatics Skunkworks, UW Madison, *Undergraduate Research Assistant*   **Jan 2021 – Aug 2021**
- Implemented **Buckingham Pi** theorem to generate over 4000 dimensionless chemical features.
- Modified methodologies of existing research papers using multiple ML models (**random forest**, **k-means**) and dimensionless features to improve performance on **MAST-ML** repository by roughly 3 percent.
- **Skills:** Python**,** Scikit-learn, Machine Learning, Feature Engineering, PCA, Google Cloud Platform

Projects

bptree, (C++, STL), GitHub   **January 2022**
- Implemented a B+ Tree data structure for a fast and efficient database management system.
- Implemented a buffer manager using the clock algorithm on top of the B+ Tree for file management system.

t12-housing-prices-visualization, (JavaScript, Node.js, React.js, chart.js, D3.js), github.io   **November 2021**
- Collaborated with 2 teammates to create a single-page interactive map visualization of US state-wise distribution of housing price index (HPI) using dataset from St. Louis Federal Reserve Economic Data.
- Implemented a color-encoded map and a line graph of HPI history for each state for comparative analysis.