PRANAY BHAKTHULA
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EDUCATION

The George Washington University, Columbian College of Arts and Science — Washington DC, United States
Data Science Masters Candidate (CGPA: 3.95*)* — December 2022
- Relevant Coursework: Deep Learning, NLP, Time Series Analysis, Data Mining, Data Warehousing, Cloud Computing

Sathyabama Institute of Science and Technology — Chennai, India
Bachelor of Engineering, Electronics and Communication (CGPA: 8.66/10) — May 2019

TECHNICAL SKILLS

- **Programming languages**: Python, SQL, R, JavaScript, C, C++, HTML, CSS
- **Database**: MySQL, PostgreSQL, Microsoft SQL Server, NoSQL- MongoDB, DynamoDB, Neo4j
- **Packages**: Numpy, Pandas, Scikit-Learn, Scipy, Keras, Tensorflow, PyTorch, Matplotlib, Seaborn, Django, Plotly
- **Machine Learning**: Clustering, Regression, Classifiers, Natural Language Processing (NLP), Image Classification
- **Tools**: Excel, Tableau, Microsoft Power BI, SPSS, SSMS, SAS, Alteryx, VMWare, Github, Bitbucket, PowerPoint, Word
- **Cloud technologies**: Amazon Web Services (AWS), Google Cloud Platform (GCP), Microsoft Azure
- **Big Data technologies**: Hadoop, PySpark, Hive, Mapreduce, Snowflake, Azure Databricks

RELEVANT WORK EXPERIENCE

Graduate Teaching Assistant — Washington DC, United States
George Washington University (GWU) — August 2022 – December 2022
- Assisted students with solving problems in Cloud Computing services such as AWS EC2, AWS S3, AWS RDS, AWS IAM and querying using SQL (Filtering, Updating)
- Graded assignments and provided constructive feedback to students; facilitated teamwork and a strategic mindset to enable developing innovative group projects

Solutions Architect Intern — Seattle, United States
Amazon Web Services (AWS) — May 2022 – August 2022
- For AWS Reinvent proved processing power of AWS Outposts by performing real time video analysis of basketball shot from free throwline to give shot and posture analysis of the shooter by object detection and video/image classification; applied AWS S3, AWS EC2, AWS Sagemaker, AWS Rekognition, Tensorflow, 2dCNN, 3dCNN, OpenCV, Yolov7
- Designed and implemented 8 different algorithms to find the best method for the project, resulted in increasing the accuracy by 15% and decreasing the runtime by 25%
- Learned AWS sales procedures/methods and tools available to assist customers by shadowing meetings between Solutions Architect and AWS customers
- Completed AWS Cloud Practitioner Certification

Student Administrative Assistant — Washington DC, United States
George Washington School of Public Health (GWSPH), Research POD2 — November 2021 – December 2022
- Assisted in creating monthly data reports of research expenditures of various departments by filtering the data using SQL queries and developing relevant pivot tables, graphs and dashboards using Excel. Performed data entry on weekly basis

Data Analyst — Andhra Pradesh, India
Centre for Rural Studies and Development (CRSD) — March 2020 - July 2021
- Created monthly data reports on various research studies by analyzing field report data and developing visualization tables and graphs using Tableau and Excel
- Produced monthly and yearly reports by filtering state budgets, agriculture, education, health related data using SQL queries in SSMS and exporting required data in Excel sheets
- Maintained data collection and data entry of field reports using Excel and helped in building a dashboard to manage the received data. Additionally, assisted in building the organization's website using HTML, CSS

TECHNICAL PROJECTS

Anomaly Detection in Wood fossil | Python (Worked under Prof. Chen Zeng to co-author a paper) — November 2022
- Developed a method to detect the different patterns in high resolution wood fossil images to classify damaged/undamaged part of the wood with an accuracy of 86% by applying the PCA model on the output of middle layers of Resnet50 and VGG19 models

World Population Analysis | SQL, Tableau — October 2022
- Analyzed trends in world population using SQL queries in MySQL database to identify top and bottom performing countries from 1980 to 2022 in terms of population, growth rate, density and geographical area
- Built Tableau interactive dashboards to visually tell stories with bar plots, line plots, pie chart, bubble charts, tables, maps, parameters, filters to consolidate observations

Fake or Real News Classification | Python — April 2022
- Classified news as real or fake with an f1-score of 0.9916 using Natural Language Processing (NLP) algorithms such as DeBERTa, RoBERTa, DistilBERT, with RoBERTa having highest f1-score

Cotton Plant Disease Prediction | Python — December 2021
- Predicted diseased plants with 96.8% accuracy by training 12K images with CNN and pre-trained models (Resnet50, VGG16, Densenet121) on AWS EC2 and GCP compute engines.
- Created GUI/web application to detect if plants are diseased by uploading a cotton plant photo

Kobe Bryant Shot Selection | Python — June 2021
- Predicted shots on Bryant's career with 67% accuracy by building MLP classifier with varied parameters
- Determined strengths and weakness from opponent's perspective in challenging Bryant in the finals by conducting EDA analysis

AWARDS AND COMPETITIONS

- Awarded Global Leaders Fellowship Tuition at GWU | Winner of GWU Student Association Datathon, Fall 2021