

# PRANAY BHAKTHULA

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## PROFESSIONAL EXPERIENCE

**Amazon Web Services (AWS) - Solutions Architect Intern – Data Science;** Seattle, WA May 2022 – Aug 2022

- Developed and implemented real time video analysis of basketball shot to provide shot and posture analysis of the shooter with accuracy of 76% by object detection and image classification using CNN, Yolov7 models
- Designed and tested over 30 ML models using AWS S3, AWS EC2 to find the best model, resulted in increasing the accuracy by 14% and decreasing the runtime by 25%
- Created dynamic AWS QuickSight dashboards, enabling a 20% increase in overall model efficiency by closely monitoring performance metrics, runtime and optimizing allocated resources
- Learned AWS sales procedures and tools available to assist customers by shadowing meetings between Solutions Architects and 4 different AWS customers

**George Washington School of Public Health – Graduate Research Assistant;** Washington, DC Nov 2021 – Dec 2022

- Developed SQL queries to extract and update research expenditures of departments, exported the results as Excel sheets from SSMS, which reduced analyzing time by 40%
- Collaborated with the IT team to implement secure and reliable data management and reporting systems using SQL Server and Tableau, resulting in a 70% reduction in report generation time
- Produced insightful monthly expenditure reports and dashboards using Excel and Tableau, contributing to a 20% improvement in resource allocation and budget forecasting accuracy
- Automated data entry by extracting information from PDF invoices and exporting relevant data to Excel sheets using Python, resulting in an 80% reduction in data entry time

**Centre for Rural Studies and Development - Data Analyst;** Andhra Pradesh, India Jun 2019 - Jul 2021

- Developed interactive Tableau dashboards to monitor KPIs and track expenditure, leading to improved data-driven decision making and 800K rupees in annual savings
- Automated ETL process using SSIS from heterogeneous data sources, leading to 60% reduction in manual data processing and reporting time, allowing team members to focus on strategic planning
- Automated web scraping using Python to collect data for monthly and annual reports, resulting in reduction of over 100 hours in manual data collection time
- Filtered Federal and State budgets data in departments such as Agriculture, Education, Health using complex SQL queries in SSMS and exported the required data to Excel sheets, which led to 50% reduction in analyzing time
- Collaborated in publishing monthly reports by using Pivot tables, filters, functions in Excel and analytical writing, resulted in doubled publications and impactful state-level campaigning for policy change

## PROJECTS

**Anomaly Detection in Wood fossil | Python** Nov 2022

- Implemented a method to detect the different patterns in wood fossil images to classify damaged and undamaged part of the wood with an accuracy of 86% by applying Resnet50, VGG19 and PCA models

**Fake or Real News Classification | Python** Apr 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
- Trained the models using AWS EC2 and GCP compute engines which reduced the runtime by 80%

**Cotton Plant Disease Prediction | Python** Dec 2021

- Predicted diseased plants with 96.8% accuracy by training 12K images with CNN and pre-trained models (Resnet50, VGG16, Densenet121)
- Created an interactive web application to detect diseased cotton plants, resulting in 100% increase in user interaction

**Kobe Bryant Shot Selection | Python** Jun 2021

- Predicted shots on Bryant's career with 67% accuracy by building MLP classifier and Random Forest classifier
- Determined strengths and weakness from opponent's perspective in strategizing against Bryant in the 2 out of 5 final appearances by conducting effective EDA analysis

## EDUCATION

**The George Washington University, Columbian College of Arts and Science** Washington DC, United States

*Data Science Masters Candidate (CGPA: 3.95/4)*

Dec 2022

Relevant Coursework: Deep Learning, Natural Language Processing (NLP), Data Mining, Data Warehousing, Data visualization

**Sathyabama Institute of Science and Technology**

*Bachelor of Engineering, Electronics and Communication (CGPA: 8.66/10)*

Chennai, India

May 2019

## SKILLS

- **Programming languages:** Python, SQL, R, SAS, HTML, CSS
- **Database:** MySQL, MS SQL Server, NoSQL – MongoDB, Hive, Hadoop, HDFS
- **Advance knowledge:** Excel, Tableau, Microsoft Power BI, AWS, Azure, Linux, Snowflake, Alteryx, Databricks, SPSS