Pooja Bejjanki

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SUMMARY

Experienced graduate student in Data Science with a strong academic background, seeking internship, co-op, or part-time job opportunities and possessing H4 EAD work authorization so no sponsorship is required now or in the future.

EDUCATION

University of Houston, Main Campus Aug 2023 – Dec 2024

Master of Science in Engineering Data Science| GPA: 4/4 *Houston. Texas*

Relevant Coursework: Machine Learning, Data Science, Probability and Statistics, Database Management Systems, Artificial Intelligence, Digital Image Processing.

V R Siddartha Engineering College Oct 2012 – Nov 2014

Master of Technology in Computer Science| GPA: 9.2/10 *Vijayawada. India*

Relevant Coursework: Data Structures, Design and Analysis of Algorithms, Data Mining, Computer Networks, Embedded Systems, Image Processing, Web Technologies, Pattern Recognition, Cryptography and Network Security.

WORK EXPERIENCE

Summer Researcher May 2024 – Jun 2024

Data Science for Energy Transition, University of Houston *Houston, Texas*

- Visualized and applied data science and ML concepts to real-world data sets like mineral, energy, and earth science.
- Developed modular code in Python for research and applications related to geospatial analysis.
- Applied predictive data analysis methodologies using the Orange machine learning and data mining toolkit
- Implemented economic principles and performed statistical and cost-to-benefit analyses for policy effectiveness.
- Collaborated with major universities and industry partners to bridge data science and energy transition.

Assistant Professor, CSE Department Sep 2017 – May 2023

GITAM University *Hyderabad, India*

- Instructed foundational courses such as Problem Solving & Programming with C", "Data Structures with C", "Operating Systems" and "Programming with Python" to first and second-year undergraduate students.
- Mentored and oversaw the research projects of three groups, each consisting of five students, guiding them in implementing frameworks with diverse algorithms to enhance their practical skills.
- Contributed as a technical seminar review panel member for third-year and final-year students, actively preparing them for internships and full-time job opportunities through mock exams and coding practice events.

Assistant Professor, CSE Department Feb 2015 – Aug 2017

RVR & JC College of Engineering *Guntur, India*

- Worked as a research and technical seminar coordinator for final-year undergraduate students.
- Managed labs for "Programming with C" and "Data Structures with C" for first & second-year undergraduate students.
- Served as a key member in departmental and university committees like lab maintenance, academic admissions, and cultural initiatives.
- Actively coordinated workshops, several faculty development programs, and workshops.

TECHNICAL SKILLS

Languages: Python, SQL, Core JAVA, Java Script, C#, C, CSS **Infrastructures & Software:** Spyder, Jupyter Notebook, Google Colab, VS code **Frameworks & Libraries:** React JS, ASP.net, Web API**,** Pandas, NumPy, Scikit-learn, Matplotlib

SELECTED PROJECTS

Real-Time Sign Language Recognition using OpenCV

- Developed a real-time sign language recognition system using LSTM networks and OpenCV, integrating digital image processing techniques.
- Implemented Media Pipe for hand gesture tracking and trained the model to accurately recognize ten sign language words.
- Created a user-friendly frontend using Pygame for real-time visualization and interaction.

Restaurant Management System using MySQL and PHP

- Collaborated as a team player in developing a Restaurant Management System using MySQL and PHP.
- Responsible for creating the Entity-Relationship diagram and implementing SQL queries and Data Definition Tasks.
- Contributed to database design, ensuring efficient data storage and retrieval for menu items, orders, reservations, and other system components.

Obesity Level Estimation Based on Eating Habits and Physical Condition

- Directed efforts in data preprocessing, EDA, and feature engineering to understand correlations between eating habits, physical condition, and obesity levels.
- Implemented logistic regression, decision trees, SVM, KNN, and ensemble models to estimate obesity levels accurately.
- Leveraged cross-validation and hyperparameter tuning to optimize model performance, aligning with the project's aim to provide insights into preventative healthcare measures related to obesity.

Bank Institution Term Deposit Using Machine Learning Model

- Leveraged machine learning techniques to analyze bank marketing data, optimize strategies, and predict customer behavior regarding term deposit subscriptions.
- Collected, preprocessed, and explored comprehensive customer datasets. Developed machine learning models (Logistic Regression, KNN, SVM, Decision Trees, Random Forest) to predict subscription likelihood.

Student Information Management System using ASP.net.

- Developed a CRUD application for Student Information Management System in .NET, utilizing ASP.NET Core, C#, SQL Server, and Microsoft Entity Framework.
- Utilized structured architecture with controllers, views, models, and database to implement key functionalities including adding/editing student details, viewing student lists, and record deletion.

COVID-19 Pre-conditions Dataset Analysis

- Performed predictive analysis on COVID-19 datasets, determining correlations between medical conditions and deaths.
- Devised a Decision Tree model with 82% accuracy for the prediction using cross-validation and hyperparameter tuning.

Titanic Survival Prediction Using Naive Bayes Classifier Algorithm

- Predicted the Titanic passenger survival likelihood using Naïve Bayes Classifier.
- Explored historical data, analyzing attributes like age, gender, passenger class, etc. for survival rate patterns.

Flight fare predictions using Random Forest Algorithm

- Designed a machine learning model using a Random Forest algorithm that provides higher accuracy in fare price prediction of flights. The prediction Accuracy of the algorithm was identified as the Random Forest Regressor with 86.70%.
- Compared the prediction Accuracy with other Machine learning algorithms.

Stock Market Predictions with LSTM

- Constructed an RNN model to predict the Future price of the stock in the stock market using Long Short-Term Memory (LSTM). For predictions, Google, Nifty50, TCS, Infosys and Reliance Stocks datasets were used.
- Developed an LSTN RNN model with 93% accuracy for the prediction of Future stock prices.

ONLINE COURSES

- “Core Java specialization” (4 courses) by Learn Quest.
- ” Programming Foundations with JavaScript, HTML and CSS” by Duke University
- “Building React and ASP.NET MVC 5 Applications Specialization” by Board Infinity
- “Machine Learning Foundations: A Case Study Approach” by University of Washington.
- “AI for Everyone” by Deeplearning.ai
- “Introduction to Data Science in Python” course by University of Michigan.
- “Data Collection and Processing with Python” course by University of Michigan
- “Data Visualization with Python” by Coursera project network.

PAPER PUBLICATIONS

- Routing Algorithm for Reducing Overhead in Mobile Ad-Hoc Networks, IJACT
  https://www.ijact.org/ijactold/volume3issue5/IJ0350046.pdf
- K-Means Algorithm for Clustering of Learners Performance Levels Using Machine Learning Techniques, IIETA
  DOI: https://doi.org/10.18280/ria.350112