

Chandra Prakash Bathula

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SUMMARY

Experienced Associate Software Developer with expertise in Machine Learning, algorithms, and Web development. Passionate about leveraging cutting-edge technologies to drive impactful solutions and proficient in end-user research, design, and development in iPaaS integration. Eager to apply expertise in creating engaging and innovative solutions while pursuing a master's in computer and information Science to advance skills further.

TECHNICAL SKILLS

Python | JavaScript | Bash | Machine Learning | Deep Learning | Image Processing | Natural Language Processing | Decision Tree | Random Forest | SVM (Support Vector Machines) | KNN | Linear & Logistic Regression | TensorFlow | Scikit-learn | Keras | Pandas | NumPy | Seaborn | Matplotlib | Clustering | Mongo | MySQL | Hyper | Git | GitHub | Windows | Linux.

PROFESSIONAL EXPERIENCE

End User Research and Design in iPaaS.

Mar 2023 – May 2023

- Conducted end user research and design in an iPaaS (Integration Platform as a Service) application.
- Proposed and implemented a solution that effectively reduced workload by 15%. Optimized the process of access acceptance/denial by creating a user-friendly interface for uploading access requests in a dropdown menu, categorized by low, medium, and high priority time ranges.
- Implemented an automated email notification system that alerts superiors when high-priority requests surpass a specific threshold, including relevant personnel in the CC.

Qentelli Solutions Pvt LTD, Hyderabad, India: Associate Software Engineer

Mar 2021– Jul 2022

- Implemented websites, mobile applications, and landing pages from concept through deployment. Developed web applications using JavaScript, Node, HTML /CSS that played a crucial role in improving overall functionality.
- Designed and implemented web applications along with 3rd-party software integrations as a web team liaison for all inter-departmental and customer-facing projects.
- Collaborated with product team members to implement new feature developments. Designed, developed, and modified 20+ software systems and custom components.
- Developed membership, event, and legal platform technology solutions, and automated internal processes.
- Worked through the software development life cycle gathering user requirements and building the code for the tool, which saved the employees 6 hours each month in manual labor.

RELEVANT PROJECTS

Netflix Movie Recommendations | SVD, KNN, XG-Boost

- Developed a Movie Recommendation System using collaborative filtering and content-based filtering techniques.
- Achieved an RMSE (Root Mean Square Error) of 1.075 and MAPE (Mean Absolute Percentage Error) of 35.02 on the test data, indicating reasonably accurate predictions.
- Compared various models, including SVD, KNN-based algorithms, and XGBoost, to identify the best-performing ones.
- Utilized XGBoost in conjunction with Surprise-based models to further improve prediction accuracy and found that the Surprise-based SVD and KNN-based algorithms exhibited the lowest RMSE values, outperforming other models.
- Considered business objectives such as interpretability and non-critical latency requirements while building the system.

Apparel Recommendations | Content-Based Recommendation, CNN, TF-IDF, IDF, Word2Vec, IDF Weighted Word2Vec

- Developed a recommendation engine for apparel products using content-based search, leveraging techniques such as Bag of Words, TF-IDF, IDF, Word2Vec, IDF Weighted Word2Vec, and CNN.
- Extracted and processed over 180,000 apparel images from Amazon API to build the recommendation system.
- Implemented seven different approaches to recommend similar apparel products based on attributes like Asin, brand, color, product type, image URL, title, and formatted price.
- Utilized trained Word2Vec and CNN models to extract visual features for more accurate recommendations.
- Conducted quantitative analysis by calculating average Euclidean distance and comparing model performances, ranking TF-IDF as the top-performing approach, followed by Average Word2Vec and Bag of Words.

Taxi Prediction in New York | Linear Regression, Random Forest Regressor, and XGBoost Regressor

- Developed and trained machine learning models to predict taxi demand accurately for a given region and time interval, achieving less than 12% Error Metric MAPE for both training and test data using XGBoost Regression.
- Cleaned and preprocessed the data by removing irrelevant coordinates and trip details, ensuring data quality and reliability.
- Utilized clustering and segmentation techniques to divide New York City into regions for more precise prediction results.
- Implemented time-binning and Fourier transform to handle time-series data and extract significant amplitudes and frequencies for prediction enhancement.
- Employed Moving Averages, Weighted Moving Averages, and Exponential Moving Averages as baseline models to establish comparison benchmarks.
- Utilized Linear Regression, Random Forest Regressor, and XGBoost Regressor models with hyperparameter tuning to optimize the taxi demand prediction accuracy.

EDUCATION

Masters in computer and information Sciences.

Aug 2022 - May 2024

Saint Louis University, St. Louis, MO

CGPA: 3.91/4.00

EXTRACURRICULAR EXPERIENCE

- An active blog writer in medium regarding concepts of Machine Learning and Artificial Intelligence.
- Worked as a student leader in Student Activist Center during bachelors. Elected as ECMIX club president during bachelors.