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WORK EXPERIENCE

Precision Planting | Bloomington, IL

AI Software Engineer

Oct 2023 – Present

- Engineered a scalable RAG Chatbot by leveraging AWS Bedrock with full-stack development in TypeScript, React, and Node.js, enabling efficient handling of complex support, HR, and sales inquiries
- Integrated the chatbot with the company's quote system, automating customized quote generation—reducing manual processing time by 60% and increasing response speed by 45%
- Collaborated with cross-functional teams to gather requirements and fine-tune the system, ensuring a robust, scalable solution that aligned with enterprise objectives and enhanced overall user experience

E-Green LLC | Boston, MA

Machine Learning Intern

May 2022 – Dec 2022

- Spearheaded development of “Automated Hand Steerable Light UV Sterilization” by designing and implementing hand gesture recognition algorithms on a Raspberry Pi board, enabling intuitive lighting control and streamlined sterilization processes
- Upgraded the platform to Nvidia Jetson Nano, enhancing real-time processing capabilities and system reliability by 50%
- Led a machine learning-driven image generation project to produce high-quality color shadow images with realistic reproduction that closely mirrored E-Prism's product outputs, advancing visual data accuracy and development efforts

IBM | Bangalore, India

Software Developer

Jan 2020 - Aug 2021

- Designed GitHub bot using advanced Natural Language Processing methods, including named entity recognition, to automate the review process for pull requests, resulting in a reduction of review time from 3 hours to just 5 seconds
- Enhanced efficiency of the development team by implementing the bot, expediting the process and identified potential issues and bugs providing valuable insights, improving overall quality and reliability of the software development workflow
- Created a dashboard for the team with help of NodeJS and EJS to display a record of different types of orders; fetching information instantly from the server and producing in a visually appealing fashion; saving overall time by 50%

Dell INC. | Bangalore, India

NLP Intern

July 2019 - Dec 2019

- Built an NLP-based Google Chrome App to successfully analyze support ticket data, identify key issues, and provide relevant solutions on ServiceNow to streamline the support ticket resolution process, resulting in improved efficiency
- Implemented NLP techniques (word embedding, topic modeling, tokenization and intent recognition) to extract meaningful information from the support ticket text, reducing average resolution time by 40%

ACADEMIC PROJECTS

Exploring the Impact of COVID-19 on Annual Personal Income in the United States

Jan 2023 - May 2023

- Provided valuable insights into the impact of the pandemic on personal income by demonstrating the power of machine learning by analyzing complex datasets and drawing meaningful insights using a range of methods and classifiers
- Used range of classifiers such as Naïve Bayes, Decision Tree, Support Vector Machines, k-Nearest Neighbors to predict impact of COVID-19 on personal income based on factors such as age, education, and occupation, achieving 85% accuracy
- Performed feature engineering by selecting and transforming variables that were most relevant for the analysis to improve the accuracy of the models and capturing complex relationships between the different variables

Tennis Ball Collector Bot: A Computer Vision Enabled Solution for Efficient Tennis Court Maintenance

Jan 2022 – May 2022

- Developed computer vision algorithms for object recognition and tracking, reaching 95% detection accuracy for tennis balls across 3 surfaces and 3 different lighting conditions
- Designed and optimized a robotic arm and gripper system incorporating precision force sensors and adaptive motion control algorithms to collect tennis balls weighing 2 to 5 ounces, reducing damage incidents by 70%
- Conducted thorough testing and validation, demonstrating a 98% collection success rate on a standard tennis court

Foreign Text Translation, Summarization and Classification

Sept 2021 - Dec 2021

- Trained a robust translation model to convert Hindi news articles to English, attaining a 90% BLEU score
- Built a summarization model to summarize each translated news article into a few sentences and a supervised classification model to classify every translated article into one of 5 categories with 85% accuracy
- Deployed NLP models, including LSTM, LDA, and BERT, for translation, unsupervised classification, and summarization tasks, achieving 90% accuracy in translation models by leveraging LSA and LexRankSummarizer for summary generation

SKILLS

AI/ML & Deep Learning: TensorFlow, PyTorch, scikit-learn, XGBoost, Recommender Systems, Langchain, A/B Testing

Programming & Data Analysis: Python, Pandas, NumPy, SQL, Spark, Feature Engineering, Data Preprocessing, Node.js, TypeScript

ML Engineering & Deployment: Git, AI Solution Deployment, Collaborative Development, AWS (Bedrock, Lambda, S3, ECS)

Concepts & Techniques: Supervised/Unsupervised Learning, Natural Language Processing, Deep Learning, Model Optimization

EDUCATION

Northeastern University, Khoury College of Computer Science, Boston, MA

Aug 2021 - May 2023

Masters of Science (MS) in Artificial Intelligence

BMS Institute of Technology and Management, Bangalore, India

Sept 2016 - Sept 2020

Bachelor of Engineering(BE) in Computer Science and Engineering