Jagadeesh Reddy Vanga

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Education

Stony Brook University, Stony Brook, New York **Jan 2023 – Dec 2024**
Master of Computer Science *GPA : 3.37/4*
Machine Learning, Operating Systems, Virtual Reality, Visualization

KL University , Vijayawada, India **Jun 2016 – May 2020**
Bachelor of Technology in Computer Science and Engineering *GPA : 8.92/10*
AI, Software Engineering, Cloud Computing, OOPS, DBMS, Data Structures and Algorithms

Experience

Skit.AI - Software Engineer(Solutions and Machine Learning) **Oct 2021 – Dec 2022**

- Built bespoke voice bots for four enterprise fin tech clients, automating call center operations and handling 10% of customer service calls (100,000/day) harnessing NLP and speech technologies
- Orchestrated seamless collaborations with diverse cross-functional teams, delivering 20+ product features
- Analyzed client calls leveraging data pipelines and SQL to gain insights into caller behavior
- Overhauled technical on boarding for hybrid roles, reducing time to 7 days for all new joiners
- Tuned and maintained ML models on ML core platform, optimized voice bot solutions to streamline development, and collaborated with sales, operations, and product teams to deliver tailored customer solutions, ensure quality standards, and prioritize high-impact initiatives

Eunimart MultiChannel - Team Lead AI Development **Jun 2021 – Sept 2021**

- Spearheaded technical leadership across 8 projects, scheduling, delegating responsibilities, and fostering clear communication within a 10-member team, resulting in a 100% project success rate
- Conducted personalized 1-1 sessions with team members, engaging, soliciting valuable suggestions, and collaboratively shaping targeted career objectives to drive professional growth
- Revamped multiple legacy AI systems, achieving a 20% increase in throughput and accuracy by 12%, surpassing prior deployment benchmarks

Eunimart MultiChannel - Software Developer **Jun 2019 – Jun 2021**

- Engineered a Similar Products Predictor deploying an ensemble model of VGG16 and BERT to identify top 10 similar products across manufacturers based on images and product details, implemented within a Flask application
- Created a Sales Prediction model utilizing XGBoost and Facebook's Prophet, leading to a 15% increase in forecast accuracy and enabling more effective inventory management and demand planning
- Developed a Product Description Generator powered by a self-hosted GPT-2 model, automatically producing high-quality descriptions from product names and attributes, cutting manual content creation time by 80% and boosting listing efficiency
- Deployed an Image Optimizer service with functionalities such as blur removal, background elimination, and resolution upgrades, reducing need for professional photo shoots and lowering seller costs by 40% while improving image quality for product listings
- Optimized a sophisticated web scraper for e-commerce marketplaces such as Amazon, eBay, Lazada, and Flipkart, harvesting a database of over 50 million products to support various data science applications

Academic Projects

DataPulse - Customer Segmentation Utilizing AI: **(GitHub Repository)**

- Implemented Customer Segmentation using AI with clustering and PCA, conducted Similar Product prediction applying Word2Vec, performed sales forecasting with Facebook's Prophet, and integrated Google's Gemma locally to provide interactive answers to user queries about dashboard graphs
- Received Graduate Best in Show recognition at Hack@CEWIT 2024 out of 30 teams

myArm - Unreal Engine: **(GitHub Repository)**

- Engineered Human-Guided Planning for Complex Manipulation Tasks, applying Screw Geometry of Motion within Unreal Engine VR using C++, allowing seamless experiment execution and data extraction for robotic hand training
- Crafted over 20 intricate components using Blender, integral to demonstrating robotic tasks, enhancing project's visual and functional appeal

VizDoom Reinforcement Learning: **(GitHub Repository)**

- Trained reinforcement learning agents in the VizDoom environment, attaining an 85% win rate with a combination of DQN and DualDQN algorithms
- Derived point clouds from 2D gameplay data to construct a comprehensive 3D map of game environment, serving as a feature for network models to boost results

Adversarial Testing for Robust Content Moderation - Research Project: **(GitHub Repository)**

- Delved into vulnerabilities of NSFW detectors on social media platforms, employing systematic black-box attack methodology with Grad-CAM-generated heat maps, exposing weaknesses and offering insights into content moderation systems' robustness
- Devised a patch attack exploiting Grad-CAM features, bypassing content moderation filters with 93% accuracy

Technical Skills

Programming Languages: Python, SQL, C, C#, C++, Java, JavaScript, TypeScript, HTML5, CSS, Shell Scripting, JSON, XML
Web Development Frameworks and Libraries: Flask, Django, ReactJS, NodeJS, Apache Tomcat
Cloud Technologies: AWS (Amazon Web Services), GCP (Google Cloud Platform), Azure (Microsoft Azure)
Version Control and CI/CD: GIT, GitHub, GitLab, Bitbucket, Jenkins, Argo WorkFlows)
Message Queues and Task Queues: RabbitMQ, Celery
Web Technologies: RESTful API, SOAP, HTML5, CSS, Web Scraping
Tools and IDEs: VS Code (Visual Studio Code), Eclipse, Jira, R Studio
Database Technologies: Postgres, MySQL, MongoDB, DB2, DynamoDB, RDS, Redis
Big Data and ETL: Hadoop, Data Mining, ETL (Extract, Transform, Load), Pandas, Numpy
Machine Learning and Data Science: PyTorch, TensorFlow, Scikit-learn, OpenCV, XGBoost Plotly
Software Engineering Concepts: Object-oriented programming paradigm, Software Design, System Implementation, Algorithm Implementation, Unit Testing, Software Project Management