Akash Sivakumar

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https://github.com/Akash080799 https://akash080799.github.io/Personal-Portfolio/

EDUCATION

Amrita Vishwa Vidyapeetham August 2021
Bachelor of Technology in Electronics and Communication Engineering (CGPA: 8.0 / 10.0) *Coimbatore, TN*

EXPERIENCE

Cognizant Technology Solutions Aug 2021 – Present
Software Engineer, Associate *Chennai, TN*

- Spearheaded the development of an enterprise-level application built on Pega's Customer Service framework to efficiently handle incoming user form submission requests from a subsidiary web application of the client organization.
- Involved in developing workflows and sub-flows to enhance an existing feature of a healthcare client's application, that leverages event-driven architecture to create cases, improving the efficiency of the client's business processes.
- Transformed client's existing CSR application by utilizing various Pega rules, including Sections, Data Transforms, Activities, Decision Tables, Validation Rules, Report Definitions, Data Pages, Connect-REST API integrations, and Service Level Agreements.

Combat Vehicles Research and Development Establishment (CVRDE), DRDO May 2019
Research Intern *Chennai, TN*

- Gained knowledge in using tools like LiDAR sensors, which are specifically used in defense applications.
- Implemented available image processing techniques on the point cloud data of various terrains collected from LiDAR sensors and cameras mounted on military tanks, attempting to predict the terrain type through statistical analysis. Developed a MATLAB GUI-based application to demonstrate the statistical features of the data.

PROJECTS

VegNet - A CNN-Based Image Classification System | *Python*, *Keras*, *Tensorflow*

- Developed a CNN-based image classification system to accurately classify various vegetables and market scenes, improving automation in agricultural processes. Implemented and optimized multiple model architectures, including custom CNN, VGG16, ResNet50, and InceptionV3, to improve classification accuracy.
- Achieved high testing accuracy of 90.6% through extensive hyperparameter tuning, early stopping, and model checkpointing, preventing overfitting and optimizing the model for real-world applications.

OTT - Movie Recommendation System | *Python*, *Pega PRPC*, *StreamLit*, *Flask*, *Rest-API*, *Docker*, *AWS ECS*

- Developed an end-to-end movie recommendation system incorporating collaborative filtering and content-based filtering algorithms to deliver personalized suggestions to users based on historical data and interactions.
- Built a CI/CD pipeline using GitHub actions and Docker, to ensure consistent deployments to AWS ECS.
- Developed a Pega platform application to deliver movie suggestions by transforming the built recommender system into a Web API.

Saline Solution Based Miniaturized Low-Frequency Dipole for UAV based River Monitoring Systems
Ansys-HFSS, *MATLAB*. | *Link: https://ieeexplore.ieee.org/document/9708266*

- Developed an innovative antenna minimization technique utilizing saline solution as a core material for low-frequency wire antennas, reducing their overall electrical length by 47%, achieving a return loss of approximately -50 dB, and enhancing bandwidth by 53%.

TECHNICAL SKILLS

Programming Languages:Python (Numpy, Pandas, Seaborn, Scikit-learn, Keras, Tensorflow), Java, MATLAB
Web Technologies and Frameworks: Pega BPM 8.6 (Dev-Studio, Admin-Studio), Pega Customer-Service Framework, Flask, StreamLit, HTML5, CSS3
Machine Learning Tools/ Techniques: Hypothesis testing, EDA, Supervised learning, Un-supervised learning, Neural networks
Database: SQL (MySQL, Oracle DB2), Google Big Query
Simulation and Data visualization Tools: Ansys HFSS, Tableau
Project Management and Additional Tools: Jira, GitHub (basics), LaTeX