Akash Sivakumar

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

Education

Amrita Vishwa Vidyapeetham **July. 2017 – Aug 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-grade application using Pega's Customer Service framework to streamline user form submissions from a subsidiary web application, reducing processing time by 20% and improving case resolution efficiency by 60%.
- Developed workflows and sub-flows to optimize a healthcare client's application, leveraging event-driven architecture to significantly improve business process efficiency by 30%.
- Transformed client's CSR application utilizing various Pega rules like Sections, Data Transforms, Data flows, Queue processors, Activities, Decision Tables, Validation Rules, Report Definitions, Data Pages, Connect-REST, 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*
Link: https://github.com/Akash080799/VegNet-Classification

- 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*
Link: https://recommendationsystem-ak.streamlit.app/

- 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.
- 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 & Libraries: Python (Numpy, Pandas, Scikit-learn, Keras & Tensorflow), Java, MATLAB
Platforms & Tools: Pega BPM (Versions 8.6, 8.23), Jira, Splunk Cloud, GitHub (Basic Proficiency), LaTeX
Web Technologies & Frameworks: Flask, Streamlit, HTML5, CSS3
Databases: SQL (MySQL, Oracle DB2), Google BigQuery
Data Visualization & Simulation Tools: Tableau, Ansys HFSS

Awards & Certifications

- Completed Professional Senior System Architect Certificate (**PCSSA**), provided by Pega in V.23, in December 2024.
- Received the **"Pat on the Back Award"** Certificate of Excellence from the client organization in November 2023, in recognition of the contributions made in transforming their application
- Completed Professional System Architect certification (**PCSA**) from PEGA in V 8.6, in April 2022.