Nivina Christy

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EDUCATION

Master of Science, Robotics and Autonomous Systems May 2024

Arizona State University, Ira A. Fulton School of Engineering, Tempe, AZ GPA: 4/4

Coursework: Introduction to Deep Neural Network, Perception in Robotics, Statistical Machine Learning, Linear Algebra, Robotics Systems, Linear System Theory

Bachelor of Technology, Electronics and Communication Engineering July 2019

APJ Abdul Kalam University (KTU), Kollam, India GPA: 8.06/10.0

Major Coursework: Object Oriented Programming, Soft Computing, Digital and Analog Signal Processing, Network Theory, Computer Communication, Information Theory and Coding, Control Systems, Microcontrollers, and Processors

TECHNICAL SKILLS

Programming Languages: Python, C, C++ , Java,JavaScript,CSS

Framework: ROS, PyTorch, TensorFlow,Keras,Pandas, Scikit-learn, NumPy, Matplotlib, Anaconda, OpenCV, Simulink, SCADE, .

Tools: MATLAB, LabVIEW, MongoDB, Docker, Linux, DaVinci Configurator-Developer, Canoe, Candela Studio, Jira, winIDEA, GIT,Confluence, LTspice, LaTex, Advanced REST Client, DOORS, BitBucket.

PROFESSIONAL EXPERIENCE

Tata Elxsi, Thiruvananthapuram, India: Senior Engineer Dec 2019 - July 2022

AUTOSAR Diagnostic Stack Development

- Developed application layer of the diagnostic module in AUTOSAR architecture for ECU sensors in automobiles.
- Implemented security services using the PRNG cryptography algorithm and secured the architecture communication.
- Involved in core development discussion and explored the architecture for requirement analysis and debugging.

ACADEMIC PROJECTS

AI Chatbox using LLM for portfolio website Summer 2023

- Creating an interactive chatbox on the website, powered by large language models, to engage and communicate effectively with the audience.

Fashion Outfit Generation using Machine Learning Recommendation. Spring 2023

- Developed a recommendation system using a bidirectional LSTM model on the Polyvore dataset to suggest a suitable combination of fashion outfits.
- Improved AUC score to .829 using Resnet50 feature extraction on image dataset over state of art Inception_v3 model.

Fashion-MNIST Classification using CNN under 500 parameters. Spring 2023

- Designed a Convolution Neural Network with 436 parameters that use the Fashion-MNIST dataset for image classification and verification and achieved an accuracy of 84.67% through Adam optimizer.

Stereo Image Depth Estimation using U-Net feature extraction. Spring 2023

- Developed stereo depth estimation on the KITTI2012 dataset using U-Net feature extraction and conducted experiments to finetune the results by optimizing the hyperparameters.
- Improved the feature extraction of base model using qualitative results and reduced the loss of validation data by 14%.

Propaganda Detection on news articles. Spring 2023

- Developed language classification models that can identify propaganda techniques used in news article and conducted comparative analysis of LSTM, BERT and RoBERTa models.
- Observed that pre-trained BERT outperform other models with a 4.5% higher F1 score.

WORK EXPERIENCE

Arizona State University, Tempe, AZ: Graduate Student Assistant Aug 2022 - May 2023

- Assisted 22 students in circuit designing and PCB board development as a part of their embedded design lab course.
- Graded LabVIEW assignments of 45 students for the electrical engineering course Signals and Systems.