

AJAY RAJKUMAR K

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An aspiring Computer Science student with curiosity to perennially learn new things in Software engineering, Data science. Strong collaborator with a deep understanding of team dynamics and the ability to adapt seamlessly.

EDUCATION

VELLORE INSTITUTE OF TECHNOLOGY Chennai, IN
B. Tech in Computer Science with specialization in AI and Machine Learning **Sep 2020 - Jun 2024**
CGPA: 8.60/10.00

Relevant Coursework: Data Structures, Algorithms, AI, Machine Learning, Deep Learning, Video Analytics.

ZION MHSS Chennai, IN
Higher Secondary **Jun 2019 - Mar 2020**
Percentage: 94.67%

ZION MHSS Chennai, IN
Secondary **Jun 2017 - Mar 2018**
Percentage: 97.00%

PROJECTS

MUSIC GENERATION USING GAN Jan 2023 - Apr 2023
Implemented Bidirectional LSTM (BiLSTM) based GAN model for generating music score, which is then converted to a MIDI file.
Gathered training data from classical piano pieces and optimized the data by employing various metrics. Implemented using Tensorflow and Numpy.

VIDEO SUMMARIZATION USING KEYFRAME EXTRACTION Jan 2023 - Apr 2023
Researched ways to improve existing methods for generating captions based on keyframes. Implemented a 3 step process with feature extractor and Decoder to simplify the proceedings. Implemented using Tensorflow, PyTorch and Numpy.

DDoS DETECTION USING DEEP LEARNING Aug 2022 - Nov 2022
Developed a XGBoost Regressor based Machine Learning model for better accuracy and faster training duration.
Performed data cleaning and correlative analysis which significantly reduced the size of the training dataset, resulting in less drastic outliers and fewer irrelevant parameters. Implemented using scikit-learn, Tensorflow, Pandas and Numpy.

MULTI-AGENT DEVICE WITH REINFORCEMENT LEARNING Aug 2022 - Nov 2022
Built a simple stockroom based robot with obstacle detection and collision avoidance, based on reinforcement learning.
Developed a Q-learning based algorithm for implementing the same and cached the data, for faster processing.
Algorithm was implemented using Numpy, Pandas and the stockroom environment was visualized using tkinter.

TECHNICAL SKILLS

Programming	Java, C++, Oracle SQL, Python
Frameworks	Tensorflow, Numpy, Pandas, scikit-learn
Tools	Jupyter Notebook, Google Colab
Operating Systems	Windows, Linux
Certifications and Training	Microsoft Security Compliance , Tensorflow