Pranav Kizhakkevellat Nair

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EXPERTISE

- Strong background in machine learning, predictive modeling, and statistical analysis, leveraging PyTorch, TensorFlow, and Scikit-Learn to develop robust solutions for complex problems
- Proficient in programming languages such as Python and SQL for data manipulation and analysis
- Strong background in statistical modeling, hypothesis testing, and experimental design
- Experienced in implementing ML pipelines, including data preprocessing, feature engineering, and model training

EDUCATION

Northeastern University, Boston, MA **May 2024**
Master of Science in Robotics
Related Courses: Reinforcement Learning, Pattern Recognition & Computer Vision, Data Visualization

SRM Institute of Science and Technology, Kattankulathur, India **May 2022**
Bachelor of Technology in Computer Science and Engineering
Related Courses: Artificial Intelligence, Data Structures & Algorithms, Object Oriented Design & Programming

TECHNICAL SKILLS & KNOWLEDGE

Languages	Python, C++, C, R, SQL, Matlab
Frameworks/Libraries/Tools	Git, PyTorch, Tensorflow, Keras, OpenMP, CUDA, OpenCV, MediaPipe, Pandas, Scikit-Learn, NumPy, Microsoft PowerBI, Tableau, Matplotlib, Seaborn, ROS
Certificates	IBM Data Science Professional Certificate, Introduction to Machine Learning, Google Introduction to Generative AI Path

EXPERIENCE

Multicoreare Inc., Champaign, IL **September 2024 - Present**
Software Research Engineer (Intern)
- Engineered enhancements to LLVM-MCTOLL for ARM32 to x86 binary translation of Android APK shared object (.so) files
- Developed testing suites for translation validation
- Created automated benchmarking scripts and utilized Android Studio's profiling tools to analyze performance differences between ARM32 and x86 implementations
- Optimized code to reduce the APK execution time by 33%

Fiserv Inc., Chennai, India **June - July 2021**
Technical Program Analyst (Intern)
- Conducted Data Analysis using advanced Microsoft Excel
- Created a dashboard with the help of Microsoft PowerBI to provide visibility for the stakeholders on the capabilities, skillset, and spread of all the off-roll employees connected to Fiserv via external vendors

Agrix, Chennai, India **Feb - July 2021**
Mobile Application Developer (Intern)
- Responsible for leading a team and conducting biweekly meetings in developing a Flutter-based Android GPS tracking application for monitoring company tractors and machinery
- Integrated the app with OpenStreetMap API to provide real-time location visibility and implemented Firebase backend for storing operational metrics

PROJECTS

Stock Price Prediction, GitHub Link **November 2023**
- Developed a Stock Price Prediction system employing AI models such as LSTM, GRU, 1D CNN, and ESN
- Applied Sentiment Analysis on Twitter feeds related to each company, aligning with stock price entries in the dataset
- Compared the predictive performances of the 4 models, determining that ESN yielded the most accurate results with a Mean Absolute Percentage Error of 2.07%

Gesture-Driven Simulated Car, GitHub Link **April 2023**
- Manipulated car movement in Gazebo by applying differential drive control using ROS and recognized hand gestures
- Evaluated the difference in performance between a model trained only on RGB images and one with RGB images along with the 21 hand keypoints extracted by Google MediaPipe
- Achieved 84.4% accuracy with RGB images and 94.8% accuracy with RGB images + keypoints for gesture recognition
- Implemented Reduce on Plateau scheduler to adjust optimizer's learning rate based on validation accuracy to prevent over-fitting