Aryan Nesti

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EDUCATION

New Jersey Institute of Technology   Newark, NJ
Bachelor of Arts in Computer Science, Minor in Mobile and Web   *Sept. 2020 – Dec. 2023*

EXPERIENCE

Data Engineer Intern   Jan 2023 – Apr 2023
NeuroTechR3   *Newark, NJ*
- Constructed a library on top of Google MediaPipe's library on hand tracking.
- Assisted in implementing a model to recognize medical gestures.
- Created a Unity exergame to showcase the model, as the gestures detected control the movements of the vehicle traversing terrain and the game and model works on mobile.
- Reconstructed the model to function on mobile devices.
- Coordinated effectively in an Agile team of 5 members

PROJECTS

AI Based Portfolio | *Next.js, Typescript, GitHub, Docker, Oracle, PineconeDB, OpenAI, Langchain,Vercel AI SDK*
- Integrated Langchain to combine our Pinecone vectorstore with OpenAI's GPT models.
- Utilized Langchain's PDF Loader so it can properly parse PDF files.
- Used Vercel's new AI SDK which simplifies the task of creating a frontend
- Setup Routes to read from the vector store and use OpenAI models to retrieve a response
- Utilized PDF uploader and developed an endpoint that can train our chatbot.

Semantic Segmentation of Satellite Images | *Python, NNI WebUI, Unet, Git, GAN*
- Integrated Neural Network Intelligence WebUI with a Unet model for classifying Satellite Imagery.
- Conducted Hyper-parameter Optimization experimentation to optimize model parameters.
- Implemented Knowledge Distillation for weaker device compatibility.
- Applied LevelPruning for improved terrain classification in satellite images.

Natural Language Processing with Disaster Tweets | *Python, WordNetLemmatizer, GloVe, Keras, Git*
- Transformed the data using a 80/20 split of training and testing for the model.
- Utilized GloVe embedding method to match vectors with common phrases and words.
- Applied WordNetLemmentizer in the nltk library to manually remove noisy data.
- Implemented Bert Tokenizer to match strings to their Bert preset counterpart.
- Hypertuned paramters with GridSearchCV for our Bert model.

Electromyography with Gradient Boosting | *Pyton, Gradient Descent, DecissionTree*
- Developed a Gradient Boosting algorithm out of scratch using sklearn's DecisionTreeClassifier
- Traversed a directory of several EMG physical action datasets and preprocessed and labeled the data
- Transformed the data using a 80/20 split of training and testing for the model.
- The model classifies the patients physical actions based on the EMG data
- Compared classification outcomes with and without Gradient Boosting

CERTIFICATIONS

CodePath – Android Development
Certiport – Microsoft Office365

TECHNICAL SKILLS

Languages: Java, Python, C, C++, Typescript, JavaScript, HTML, CSS, Kotlin, Apple-Script
Frameworks: React, Node.js WordPress, Material-UI, FastAPI, .Net, Next.js, pandas, NumPy, sklearn, Tensorflow, Pytorch, Keras, Langchain, Vercel AI SDK
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Android Studio, Xcode, Oracle, SQLite, MySQL, PineconeDB, OpenAI