

Rory McGinnis

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github.com/rorymcginnis1

rorymcginnis1.github.io/

Education

San Francisco State University

Bachelor of Science Computer Science

Minor in Mathematics

Dec 2023

3.85 GPA

Experience

Artificial Intelligence Research, San Francisco State University

March 2023- January 2024

- Established a streamlined pipeline to assess the efficacy of five distinct AI models, namely AlexNet, MobileNet, MnasNet, ShuffleNet, and SqueezeNet
- Devised a sophisticated system for processing image datasets, augmented by a truth value repository
- Leveraged D3.js to craft compelling visualizations, effectively communicating the accuracy outcomes of each model and facilitating nuanced comparisons of their performance metrics

Random Forrest Classifier Research, San Francisco State University

April 2023- December 2023

- Conducted an in-depth evaluation of model performance utilizing out-of-bag accuracy, confusion matrix analysis, and visualization of feature importance
- Formulated and implemented a comprehensive assessment framework that accounted for diverse data characteristics and F1 score considerations, offering nuanced insights into the efficacy of the model
- Generated exemplary research outcomes that garnered recognition from Professor Petkovic, leading to the integration of the work into the curriculum of his class

Projects

Human Pose Estimation

github.com/rorymcginnis1/HumanPoseEstimation

- Synergized computer vision and 3D modeling technologies to project captured gestures onto a virtual avatar, enhancing user interaction and immersion
- Implemented real-time gesture tracking using a camera to capture user movements
- Developed an innovative human pose estimation system utilizing advanced computer vision techniques
- Utilized Blender for 3D modeling and animation to enhance the immersive experience
- Created 3D modeling and animations with Blender to enhance the immersive experience

Mini YouTube

github.com/rorymcginnis1/MiniYoutube

- Conceptualized and developed a fully functional web platform inspired by YouTube's core features
- Implemented robust user authentication mechanisms, facilitating secure account management and content access
- Enabled seamless video upload and removal capabilities, empowering user-generated content contribution
- Enhanced user engagement through interactive features such as comment sections

Twitter Sentiment Analysis

github.com/rorymcginnis1/Sentiment-Analysis

- Developed a sentiment analysis model using MLP for twitter data with four distinct sentiment classifications Positive, Negative, Neutral and irrelevant
- Implemented data preprocessing techniques to clean and filter tweets using regular expressions
- Created custom Pytorch datasets for sentiment analysis handling feature and label processing with one-hot encoding
- Designed the MLP architecture using a neural network model
- Evaluated the models performance on the test set and achieving a competitive accuracy percentage

Skills

Languages: Python, Java, C++, C, C#, HTML, Javascript, SQL

Tools/ Frameworks: Git, Flask, React, Pandas, NumPy, Blender, Trello, Node, MongoDB, Matplotlib, APIs, Spring Boot

Machine Learning: Pytorch, scikit-learn, OpenCV, TensorFlow, Random Forrest