Hong Jie Yang Software Developer

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github.com/HongJieYang | Website Portfolio: hongjieyang.github.io

Education

Bachelor of Electrical and Biomedical Engineering, McMaster University   2016 – 2021
Minor in Computer Science, Graduated with Distinction (3.87 / 4.0 GPA)

The Gordon and Agnes (Twambley) Brash Academic Grant ($8 000),   2019
Provst Honour Roll Medal (Achieved 4.0 Average for a Full School Year),   2019

Projects

Article Summarizer App | Python, Dash, NLTK, Beautiful Soup, HTML, CSS, scikit-learn
- Developed a web application that can scrape the homepage of the **CBS**, **NBC**, **The Guardian**, **CBC** and generate individual summaries for each article
- Created the interactive user interface for both local and online use
- Reached a categorization accuracy of **95.51%** by using **support vector machines** based on the **tf-idf** (term frequency–inverse document frequency) feature

Age Gender and Emotion Predictor | Python, Keras, OpenCV
- Produced a real-time predictor of age, gender and emotion based on live webcam input
- Utilized **transfer learning** with neural networks and applied **feature extraction** on the **VggFace** model based on existing **Vgg16** architecture
- Achieved accuracies of **78.77%** (**96.01%** one off accuracy) for age, **94.85%** for gender, and **64.44%** for 5 different emotions

ECG and SCG Analyzer | MATLAB, Embedded C
- Implemented **a low cost ($250)**, **non-invasive**, **novel** application for recording and analyzing of ECG (Electrocardiography) and SCG (Seismocardiography) signals
- Developed an algorithm to extract data features based on testing datasets
- Established a user interface using MATLAB app development toolbox

Portfolio Website | HTML, CSS , SASS, JavaScript, jQuery
- Produced a website used to showcase projects and provide direct links to GitHub repositories
- Included an interactive lightbox gallery for each of the different projects

Technical Skills

- Python (pandas, NumPy, scikit-learn, matplotlib, BeautifulSoup, NLTK, Keras, OpenCV)
- Languages: MATLAB, SQL, JavaScript, HTML/CSS
- Frameworks: PyTorch, TensorFlow, React