Trang Tran

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Education:
B.S. in Computer Sciences and Biology - GPA **3.96/4.00** - Graduation year: **2020**

Technical Skill:
→ ***Languages:*** Python, Java, C/C++, Ruby, Perl, Javascript, PHP, SQL, HTML, CSS, JQuery, Scala, Haskell, Prolog.
→ ***Operating system***: Windows, MacOS, Unix Shell, Linux, Ubuntu, Android, iOS.
→ ***Framework:*** React/Redux, Bootstrap, ReactStrap,Semantic UI, Ruby on Rails, Express, Django
→ ***Skills:***

- **Software Development**: Fullstack Web Development (UI/UX Design, Front-end, Back-end, Databases).
- **Cloud Computing:** Certified AWS Solution Architect Associate (Best practices in Cloud Security, Reliability, Efficiency, Operational Excellence, and Cost Optimization).
- **Machine Learning**: Neural Networks, TensorFlow, PyTorch, Caffee, Theanos, Scikit Learn, Keras.
- **Computer Vision**: Edge Detection, Image Segmentation, Object Localization, Object Detection, Transfer Learning.
- **Natural Language Processing**: Audio Classification, Speech Recognition, Sound Synthesis, Machine Translations, Chatbot.

→ ***Highlighted Projects:***

- **Image Clustering using Transfer Learning and K-means, a scalable semi-supervised and content-based data analytics on construction-related images.** 200k of production-level images are pre-processed and converted into tfrecords and fed into pre-trained neural networks on tensorflow backend for efficient feature extraction. Features were fed into optimzed K-means algorithm running on CUDA for fast clustering on GPU. Silhouette scores and cluster visualization tools were then used to perform hyper-parameter tuning and find most optimal clusters.
- **Yume,** a Social Networking Platform for college students which includes forum, messenger, and live video chat. The web application is developed on Nodejs and React, powered by open-source technologies, and hosted on Amazon Web Services (AWS). The product is now on development stage.
- **CSED Research,** a resource website, funded by the National Science Foundation, which provides a centralized, convenient way to find computer science education research.
- **Facial Recognition**, using Transfer Learning to perform Computer Vision tasks . I modified Inception v3, a pre-trained Deep Convolutional Neural Network by Google to learn and detect facial features of humans in video,
- **Audio Recognition,** implement Convolutional Neural Network to classify preprocessed audio spectrograms of human voices.
- **Neural Machine Translation**, using Tensorflow Data Processing Pipelines and Bidirectional Recurrent Neural Network with Attention Mechanism to translate text from Vietnamese to English.
- **Linear Programming and Ford-Fulkerson algorithm**, a mathematical optimization tool in Mathematica which solve problem of Maximal Flow and graphically demonstrate the optimization progress.
- **AI Agent playing Connect 4**, implement Adversarial Search and Reinforcement Learning. By using a heapify, recursive Depth First Search and Alpha-Beta pruning, the program is pruned and optimized by n/log(n).
- **FIFA World Cup 2018 Prediction**, implement Deep Neural Network with 85% accuracy to predict winning chance per match and Decision Tree to simulate 1000 seasons and predict most probable championship.

Work Experience:

- **Software Engineering Intern,** Procore Technologies, CA
- **Co-Founder**, **AWS Cloud Solution Architect and Full-stack Software Developer,** Yume, IL
- **Software Developer**, National Science Foundation Grant, IL
- **Machine Learning Collaborator,** Google Developer Group, Hanoi, Vietnam
- **Computer Sciences Teaching Assistant**, Computer Science Department, Knox College

Achievement

- **Junod Mathematical Research Award**, Mathematics and Computational Research in Linear Programming, Knox College
- **Third Place in National Biology Competition**, Vietnam
- **Dean's List for Outstanding Academic Achievements,** 2016-2017 and 2017-1018 academic years, Knox College
- **Knox Lincoln Scholarship and Knox Grant Award,** 130.000$ toward undergraduate tuition, Knox College