HYUN JAE, CHO

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Education

University of Virginia (December 2019)
- M.S. in Computer Science (GPA 3.96 / 4.00)
- Coursework: Natural Language Processing, Computer Vision, Bayesian Machine Learning

University of California, Berkeley (May 2018)
- Computer Science
- Coursework: Machine Learning, Artificial Intelligence, Optimization Models

Skills: Data Science, Natural Language Processing, Computer Vision, Machine Learning
Interests: Bioinformatics

Research Experiences

University of Virginia - Link Lab (Fall 2018 - current)
- Evaluate safety and compare driving algorithms for self-driving cars using LGSVL simulator.
  - Explainable AI: Generate text-based explanations of self-driving cars' actions.
  - Edge Case Detection: Implement Reinforcement Learning methods to train agents to generate collisions for Baidu's Apollo Project.
- Directed by Prof. Madhur Behl.

University of Virginia - DataBio (Fall 2019 - current)
- Transform transcription factor binding sites (TFBS) resulted from biological experiments into vector embeddings by applying natural language processing techniques.
- Develop innovative algorithm to evaluate the relationship between pairs of tfbs.
- Directed by Prof. Nathan Sheffield.

UC Berkeley - SETI (Fall 2017)
- Implemented convolutional neural networks (CNNs), transfer learning with VGG19, Mask R-CNN for detecting radio pulses called Fast Radio Bursts (FRBs) with 99% accuracy.
- Directed by Ph.D. student Jerry Zhang.

Projects

Bayesian Image Classification (Spring 2019)
- Applied Bayesian conditional probability concept to neural networks for improving robustness against uncertain image classifications.
- Doubled the classification accuracy of image classification when compared to conventional neural networks.

Variational Image Captioning using Deterministic Attention (Fall 2018)
- Designed and implemented an image captioning model that generates diverse and accurate captions given an image by combining deterministic attention mechanism and conditional variational autoencoder.