CAT P. LE

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SUMMARY

Machine Learning Scientist with 5+ years of experience developing neural network models and learning algorithms in computer vision and natural language processing. Experienced in data analysis, image classification & generation, object detection, and time-series regression. Proficient in collaborating with coding teams to develop large-scale AI applications.

Education

DUKE UNIVERSITY — Durham, NC
Ph.D., Electrical and Computer Engineering — May 2023
Thesis: Task Affinity and Its Applications in Machine Learning
Advisor: Dr. Vahid Tarokh

CALIFORNIA INSTITUTE OF TECHNOLOGY — Pasadena, CA
M.S., Electrical Engineering, GPA: 4.00 — Jun 2017
Advisor: Dr. Babak Hassibi

RUTGERS UNIVERSITY — New Brunswick, NJ
B.S., Electrical and Computer Engineering, GPA: 4.00 — Jun 2017
Honors: Summa Cum Laude, Matthew Leydt Society, John B. Smith Award, Tau Beta Pi

Experience

AMAZON — Arlington, VA
Research Scientist — Jun 2022 – Sep 2023

- Analyze open-domain dialogs with the sentiment, relevance, and specificity analysis models.
- Develop dialog evaluation systems with BERT, LSTM, and causal inference analysis.
- Help improve the prediction performance for the customer's and expert's ratings.

MOTOROLA SOLUTIONS — Dallas, TX
Software Engineer — Jun 2017 – Aug 2018

- Develop a Camera Shutter Synchronization System with LED Strobing for cameras.
- Optimize the Optical Character Recognition algorithm of the license plate recognition cameras.
- Improve the energy consumption and the performance of the license plate and facial recognition cameras.

Recent Publications

Improving Open-Domain Dialog Evaluation with a Counterfactual LSTM — IWSDS 2023
Cat P. Le, Luke Dai, Michael Johnston, Yang Liu, Marilyn Walker, Reza Ghanadan

Task Affinity with Maximum Bipartite Matching in Few-Shot Learning — ICLR 2022
Cat P. Le, Juncheng Dong, Mohammadreza Soltani, Vahid Tarokh

Fisher Task Distance and Its Applications in Neural Architecture Search — IEEE Access 2022
Cat P. Le, Mohammadreza Soltani, Juncheng Dong, Vahid Tarokh

Task-Aware Neural Architecture Search — ICASSP 2021
Cat P. Le, Juncheng Dong, Mohammadreza Soltani, Vahid Tarokh

Causal Knowledge Transfer from Task Affinity — Submitted to UAI 2023
Ahmed Aloui, Juncheng Dong, Cat P. Le, Vahid Tarokh

Skills

Technical: Python, C++, Matlab, Numpy, Scipy, Scikit-learn, Pandas, Matplotlib, OpenCV, Tensorflow, Keras, Pytorch
Research Area: Computer Vision, Neural Architecture Search, Natural Language Understanding
ML Framework: Transfer Learning, Continual Learning, Few-Shot Learning, Reinforcement Learning