CUONG (ERIK) DAO

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EXPERIENCE

Software Engineer Lead (Remote), Insight Data Science — Apr 2018 – Present
Series-B, Y-Combinator Startup — *San Francisco, USA*

- Establish a remote engineering team from zero to five software engineers to build a cross-platform professional network for top-tier data professionals
- Evaluate architectures, devise and implement solutions for all major components of the platform (e.g., authentication; end-user features; a high-performant messaging system with 2 million messages/quarter; email/native notification services; analytic dashboard) with Python Django, React, Redux, AWS, Grafana

Research Intern, Image and Video Understanding Lab — Aug 2017 – Jan 2018
King Abdullah University of Science and Technology — *Jeddah, Saudi Arabia*

- Built a data pipeline to crowd source a large-scale dataset (i.e., $50,000$ images with $150,000$ box annotations) and created a model for detecting fishes in underwater camera footage using Faster R-CNN with 93% accuracy
- Devised actor-supervision based algorithm for spatiotemporal action localization in video data with Inception, Faster R-CNN

Research Assistant, Database Lab — Jun 2015 – Sep 2015
National University of Singapore — *Singapore*

- Built a data crawling system to collect $130,000$ maritime images from various sources on the Internet
- Devised and implemented a deep convolutional neural network for vessel images classification achieved a top-1 accuracy of 95.31%; published the work in SoICT 2015 [Link]

PROJECTS

Human Activities Recognition in Videos using Weakly-Supervised Learning [Link]

- Devised and implemented an actor-based pooling operation in TensorFlow for creating video attention feature
- Implemented a model based on Inception v2, Faster-RCNN on TensorFlow, trained with weakly-supervised learning. The model achieved on-par mAP with fully supervised models

Large-Scale Dataset and Benchmark for Visual Question Answering Models [Link]

- Built a parallel data processing pipeline in Python, deployed on a supercomputer, to generate a dataset of 10 million sentences for visual question answering (VQA)
- Established a novel framework – the first of its kind – for quantifying the robustness of VQA model. The work was published at AAAI 2019 (acceptance rate 16.2%)

SKILLS

- **Programming Languages:** Python, Java, Javascript, Typescript, SQL
- **Packages:** Scikit-Learn, Pandas, PyTorch, Numpy, Matplotlib, React, Redux, Python Django, Java Spring
- **Tools/Platforms:** PostgreSQL, Redis, AWS (EC2, RDS, ElastiCache, ElasticSearch, S3, CloudFront), Google Cloud (Compute Engine)

EDUCATION

KTH Royal Institute of Technology — Stockholm, Sweden
Master in Machine Learning — Aug 2020 – Present

Hanoi University of Science and Technology — Hanoi, Vietnam
Engineering Degree in Information and Communication Technology — Aug 2011 – Mar 2017