

ZHENYE NA

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EDUCATION

University of Illinois at Urbana-Champaign

May 2019

Master of Science, Industrial Engineering in Advanced Analytics
Concentration in Computational Science & Engineering

Dalian University of Technology

July 2017

Bachelor of Engineering, Harbor, Waterway and Coastal Engineering

SELECTED PROJECTS

Flappy Bird hack using Deep Reinforcement Learning (OpenCV, PyTorch)

Nov. 2018 - Dec. 2018

<https://github.com/drl-dql/DQN-Flappy-Bird>

- Implemented Double DQN model with PyTorch in PyGame Learning Environment
- Applied DNN with convolution layers to extract features of Flappy-Bird game and trained the agent using Double DQN algorithm
- Trained model in NCSA Blue Waters supercomputers and utilized Google Colab for environmental pre-configuration
- Analyzed the influences of different parameters settings and optimizer choices make on the agent training results - reward and loss
- Concluded ~ 30 reward scores and 1-min play before game ended after training

Image Similarity using Deep Ranking (Python, PyTorch)

Oct. 2018 - Nov. 2018

<https://github.com/Zhenye-Na/image-similarity-using-deep-ranking>

- Implemented Siamese Network in PyTorch by using pre-trained ResNet-101 model on ImageNet for Deep Ranking
- Integrated with image query API for interactive image similarity searching and displaying
- Proved that Multi-scale Network model could be replaced by a ResNet-101 model and still reached impressive 55% test accuracy after training only 20 epochs

MAMP based Online Store: Mining Rig Assembly (Bootstrap, MariaDB)

Mar. 2018 - May 2018

<http://rigassembly.web.engr.illinois.edu/>

- Conceptualized an MAMP based eCommerce application for conveniently browsing, storing rig setups
- Implemented on-line store using Bootstrap for front-end, MariaDB for back-end, FushionCharts for data visualization
- Designed and maintained database in MariaDB by 3rd-party API integrating Amazon and Newegg
- Introduced additional features such as performance estimate, product information visualization, price notification and rigs payback period computation

WORKING EXPERIENCE

Data Analyst Intern

Sept. 2016 - Nov. 2016

Dalian Highway Construction Group

Dalian, China

- Evaluated highway maintenance cost based on factors like traffic weight, bridge/tunnel ratio and so forth
- Adapted Linear and Nonlinear Regression model in SPSS and the model error is within 10%
- Created data visualization in Excel for Cost Manager by using VBA
- Optimized road maintenance cost by 20% based on the appraisal factor model

TECHNICAL SKILLS

Languages	Python, Java, C/C++, Go, MATLAB, SQL, Shell scripting, JavaScript, Julia
Frameworks	Tensorflow, Pytorch, Node.js, REST
Tools	MySQL, MongoDB, MariaDB