Xiaohan Zou

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Education

Tongiji University, Shanghai, China   09/2016 – 07/2020
B.Eng. in Software Engineering, Overall GPA: 84.35/100

Publications

- **Xiaohan Zou**, Cheng Lin, Yinjia Zhang, and Qinpei Zhao. "To be an Artist: Automatic Generation on Food Image Aesthetic Captioning", **ICTAI 2020** (Acceptance Rate: 25%, **Oral Presentation**) [Paper] [Code]

Research Experience

Food Image Aesthetic Captioning, Tongji University, Link   04/2020 – 06/2020
- Proposed a novel framework consisting of a single-attribute captioning module and an unsupervised text summarization module for generating aesthetic captions for food images, **published in ICTAI**
- Designed a data filtering strategy inspired by TF-IDF method for building a dataset for this new task
- Outperformed baselines and existed methods substantially in terms of diversity, novelty and coherence

Fault Diagnosis for Microservice Architectures, Tongji University   09/2018 – 01/2019
- Identifed the culprit microservices without any expert knowledge using Bayesian network and random walk
- Outperformed traditional approaches with 6.56% accuracy improvement

Semi-Supervised Machine Translation, Peking University   07/2018 – 08/2018
- Utilized the structure duality to boost the learning of two dual tasks based on shared hidden space
- Designed two denoising auto-encoders consisting of encoders and decoders of two traditional Seq2Seq neural machine translators to make use of unpaired data
- Outperformed strong baselines by 1.0 - 2.9 BLEU on IWSLT'15 and WMT'14 dataset

Professional Experience

Software Engineer Intern, Acoustic-Optic-Electronic Co., LTD. of China Electronics Technology Group Corporation, Chongqing, China   10/2020 – Present
- Visualized Sanxingdui's 3D excavation site and sensor data using Cesium and Vue
- Wrote scripts to label ancient handwritten characters and generate OCR training files automatically

Game Engineer Intern, Banana Interactive, Shanghai, China   10/2019 – 05/2020
- Participated in the development, updating and testing of 3 H5 games using JavaScript and Construct 3
- Ported a game packaging and deployment tool from Windows to Linux and MacOS

Selected Open-Source Projects

Flint: A toy deep learning framework implemented in Numpy from scratch, Github 01/2021 – Present
- Implement an autograd engine, Linear, Convolution, Pooling, Flatten, RNN, Dropout and BatchNorm layers, 6 optimizers, 4 loss functions, 3 activation functions, 5 initializers and a data loader in pure Numpy

Metallic: A lightweight and modularized PyTorch meta-learning library, Github   10/2020 – Present
- Implemented 7 meta-learning algorithms (supported almost all commonly used optimizers) and data loaders for popular datasets with complete documentation

Selected Awards and Honors

Bronze, China Collegiate Programming Contest (CCPC)   2018
Honorable Mention, ACM International Collegiate Programming Contest (ICPC) Asia Regional 2018
Second Prize, China Mathematical Contest in Modeling (CUMCM)   2017, 2018

Skills

Programming Languages: Python, JavaScript, HTML/CSS, C/C++, Java, MATLAB
Tools and Frameworks: Git, PyTorch, Keras, Linux, Vue, Django, LaTeX
Languages: Chinese (native), English (proficient, TOFFEL: 106, GRE: 322)