

# XIAOHAN ZOU

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## EDUCATION

**Tongji 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

- Identified 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,  $\text{\LaTeX}$

**Languages**: Chinese (native), English (proficient, TOEFL: 106, GRE: 322)