

# MENGXIAO LIN

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## Education

### University of California, Davis

M.S. in Computer Science

Sep 2019 - June 2021

GPA: 4.0

Selected Courses: Distributed Database Systems, Operating Systems

### Fudan University

B.Eng in Software Engineering (Data Science & Technology)

Sep 2014 - Jul 2018

GPA: 3.45

Selected courses: Object-oriented Programming, Database, Web Programming, Machine Learning

## Skills

- Programming Language: C/C++, Python, Java, JavaScript, Rust.
- Libraries & Frameworks: React.js, Vue.js, Flask, CUDA, Qt, Android, PyTorch.

## Work Experience

### Research Engineer at Megvii Technology (Face++)

Jul 2018 - May 2019

- Proposed and implemented a novel neural network for human pose estimation to ease the overlapping problem in crowded scenes and improved model performance by 10% on real-world crowded scene data.
- Led a team to apply neural architecture search on the face recognition task. We sped up face recognition models for smartphones by around 20% without reducing the accuracy.
- Implemented high-performance channel shuffle in ShuffleNet in GPU and optimized object detection performance on convolutional neural network for mobile devices.

## Selected Projects

### Virtual Orchard

Jan 2020 - Present

- In charge of the frontend part in Virtual Orchard project, a agriculture analyzing software developed by Digital Agriculture Laboratory at UC Davis.
- Constructed the visualization dashboard with Vue.js and Leaflet and achieved user-friendly user interface based on satellite maps.
- Designed and implemented interactive data visualization tools with D3.js for analyzing agriculture data.

### PytorchAegis: Data-Privacy Preserving Machine Learning Platform

Jan 2020 - Mar 2020

- Team leader of the project. PytorchAegis is a research project to utilize Intel SGX technology to protect user data when training machine learning models on the cloud services.
- Implemented the host memory enclave part and its communication with device memory of the prototype system with Intel SGX and Nvidia CUDA.
- The prototype system achieves almost the same training speed (less than 6% slower) without sacrificing security of data.

### Dependency Parser for Universal Dependencies

Nov 2017 - May 2018

- Proposed and implemented a novel attention model for transition-based dependency parsing by incorporating information from the stacks and buffers in parsers. We improved UAS by around 1% on English and French corpus. Source code available at <https://github.com/linmx0130/parserChiang>.
- Worked as the core contributor and was responsible for design and implementation of FudanParser system, which was submitted to CoNLL 2018 Shared Tasks. Our work placed 17th in the rank list.

### April Fool's Day Mobile Game

Mar 2018 - Apr 2018

- Designed and implemented a quiz game about the campus of Fudan University for *99 Degree News Club*.
- Deployed HTML5, Vue.js and Bootstrap to implement the game app. Compatible for all kinds of mobile devices and browsers.
- Attracted more than 1000 players and more than 300 new subscription users on the first day it was launched.

### Yet Another MXnet DETection

Oct 2017

- Reimplemented Faster-RCNN algorithm in MXNet Gluon framework. Achieved a similar performance compared to the original paper.
- Source code available at [https://github.com/linmx0130/ya\\_mxnet](https://github.com/linmx0130/ya_mxnet). 50+ stars!

## Selected Publications <sup>1</sup>

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1. Danlu Chen\*, **Mengxiao Lin\***, Zhifeng Hu\* and Xipeng Qiu. A Simple yet Effective Joint Training Method for Cross-Lingual Universal Dependency Parsing. In *Proceedings of the CoNLL 2018 Shared Task: Multilingual Parsing from Raw Text to Universal Dependencies*, 2018.
2. Xiangyu Zhang, Xinyu Zhou, **Mengxiao Lin** and Jian Sun. ShuffleNet: An Extremely Efficient Convolutional Neural Network for Mobile Devices. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
3. Xiaoqing Zheng, Jiangtao Feng, **Mengxiao Lin** and Wenqiang Zhang. Context-Specific and Multi-Prototype Character Representations. In *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence (IJCAI)*, 2016.

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<sup>1</sup>\* indicates equal contribution