

# Xiaohe Xue

xiaohe.xue@nyu.edu

## EDUCATION

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***Courant Institute of Mathematical Sciences, New York University***

*September 2019 – Now, NYC, U.S.*

Master of Science, Computer Science

***University of Minnesota, Twin Cities***

*September 2016 – May 2017, Minneapolis, U.S.*

Undergraduate Exchange Program, Computer Science, GPA: 3.25/4.0

- Relevant Coursework: Programming Graphics and Games, Intro: Artificial Intelligence, Intro Compilers, Visualization

***Beijing Jiaotong University***

*Sep 2014 – July 2018, Beijing, China*

Bachelor of Engineering, Software Engineering, GPA: 88.2/100

- Earned: Outstanding Academic Records Scholarship in BJTU (2014-2015), State Scholarship in China Scholarship Council (2016-2017), Outstanding Student in State Key Laboratory of Computer Architecture (Chinese Academy of Sciences) in 2017
- Relevant Coursework: Introduction to Software Engineering, Data Structure, Computer Network, Database System

## PUBLICATIONS

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Luo C., Zhan J., Xue X., Wang L., Ren R., Yang Q. (2018) Cosine Normalization: Using Cosine Similarity Instead of Dot Product in Neural Networks. In: Kůrková V., Manolopoulos Y., Hammer B., Iliadis L., Maglogiannis I. (eds) Artificial Neural Networks and Machine Learning – ICANN 2018. ICANN 2018.

## EXPERIENCE

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***Machine Learning R&D***

Apple R&D (Beijing) Inc.

*May 2019 – August 2019, Beijing, China*

Automation Tool Development (Machine Learning) Intern

- Projects:
  - Chinese Character Style Transfer, which, after learning a specific font from 20 Chinese characters, can produce other over 6000 characters with those fonts.
  - Inpainting system for high-resolution images, which combines inpainting and super resolution functions to recover high-resolution(3000x4000) masked images.
  - Internal ios App demo with SwiftUI and its node.js server.
- Focus: Generative adversarial networks
- Tools: Pytorch, Tensorflow, AWS

### ***Research on Cosine Normalization Based on Recurrent Neural Network***

Institute of Computing Technology, Chinese Academy of Sciences

June 2017 – March 2018, Beijing, China

Research Assistant

- Responsibility: contributed to the Cosine Normalization in State Key Laboratory of Computer Architecture, ICT, CAS. In deep learning, previous studies on CN demonstrated its excellent performance of Normalization in FCN (Fully Connected Networks) and CNN (Convolutional Neural Networks), but the research about CN based on RNN is empty. My research aimed at applying CN on RNN and to ensure it could maintain excellent performance through various RNN experimental models.
- Outcome: successfully verified the excellent performance of Cosine Normalization in RNN.

### ***Simple Compiler Applied to the Programming Language – Tiger***

January 2017 – May 2017, Minneapolis, U.S.

Individual Course Project

- Tools: Standard-ML, Linux
- Techniques: Functional Programming, Fundamentals of Compiling, Regular Expression

### ***Studies on Key Techniques of Image-based Target Retrieval and Identification***

April 2016 – April 2017, Beijing, China

Participant

- Tools: Python, MySQL, VLFeat
- Techniques: Computer Graphics, Data Structure, Data Mining

## **LEADERSHIP**

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### ***Chinese Software Innovation Contest***

Dec 2017 – Mar 2018, Beijing, China

Leader of the team

- Project: Video Retrieval System Based on Deep Learning
- Techniques: Video Classification Based on Deep Learning, NLP, Computer Graphics

## **SPECIAL SKILLS**

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- IT Skills:
  - Programming Languages: C/C++, Python, Java, Clojure, JavaScript, HTML, Standard-ML
  - Programming Libraries: Tensorflow, Chainer, Pytorch, WebGL, Android, SwiftUI, D3.js, Node.js, VLFeat
  - OS: Linux, Windows, MacOS
  - Development Tools: Mysql, Git, Unreal Engine
- Languages: Mandarin (Native), English (TOEFL 105)