# Yang **Zhou**

## Machine Learning Developer

♀ 1591 Riverside Drive, Ottawa, ON

- > M.A.Sc graduate from University of Ottawa on Deep Learning based Image Processing.
- > Development skill on machine learning, Web and mobile platforms.
- > 4 years' work experience in IBM China.

## 📑 Skill

Languages Python, C++, JavaScript, Elixir, Go and Rust

Frameworks PyTorch, NumPy, Keras, Tensorflow and SciKit-Image

Development Tools Vim, Git, Docker, Vagrant

Operating Systems Linux (Debian, RHEL), macOS and Windows

Others Web development (HTML, React) and mobile development (iOS)

## LANGUAGE





- > Fast learner
- > Strong self-motivation
- > Creative and critical thinking
- > Enthusiastic about cutting-edge technology

# **E**DUCATION

2016-2018 M.A.Sc., Electrical and Computer Engineering, University of Ottawa, Ottawa, Canada 2008-2012 B.Eng., Electrical and Information Engineering, Beihang University, Beijing, China



## PUBLICATIONS

#### 2018 Efficient Image Matting based on Dynamic Filter Network

- > Lead author.
- > A novel CNN-based image matting (foreground extraction) method.
- > Achieve the state-of-the-art performance while being more efficient than other methods.
- > Experiments have been completed. The paper is in progress.

[Image Matting ] Dynamic Filter Network ] [MobileNet ] [GridNet ] [CNN ] [PyTorch ]

## February 2018

## Video Super-Resolution with Compensation in Feature Extraction

- > Lead author.
- > A novel CNN-based video super-resolution (upsampling) method based on my previous work.
- > Outperform the state-of-the-arts by a large margin.
- > The paper has been ready for submission.

Video Super-Resolution | Dynamic Filter Network | ResNet | CNN | PyTorch

## December 2017

## Knowledge Base Completion via General Score Function

- > Lead author.
- > A novel knowledge base completion (prediction) method with a self-learned adaptive model.
- > Outperform the state-of-the-arts with little overhead.
- > Derived from a course project on graphical model.
- > The paper has been ready for submission.

Knowledge Base Completion | Knowledge Graph | PyTorch

## October 2017 | Video Super-Resolution via Dynamic Local Filter Network

- > Lead author.
- > A novel CNN-based video super-resolution method.
- > Outperform the state-of-the-arts by a large margin.
- > The paper has been ready for submission.

Video Super-Resolution Dynamic Filter Network Auto-encoder CNN PyTorch

## WORK EXPERIENCE

## July 2016 July 2012

### Engineer for IBM Power Systems, IBM, China

- > In charge of maintenance services for VIP customer, CITIC Bank.
- > Software technical support for IBM AIX Unix systems and PowerHA high availability systems.
- > Hardware technical support for IBM Power systems, PowerVM virtualization systems and DS/XIV data storage systems.

IBM Power System Unix high-availability virtualization

## PROJECT EXPERIENCE

### November 2016 | H.264 video decoder

- > Built from scratch in Python.
- > For educational purpose.
- > Capable of decoding luminance channel from bitstream.

video decoder H.264 Python

### December 2015

## WebVR video player

- > A web player which plays panorama video stream in VR mode.
- > A technical prototype based on WebVR standard.

video streaming | WebVR | Javascript

#### June 2015

## Virtual suit trial web app

- > A techinical demo of a virtual suit trial web application.
- > Based on Three.js and WebGL.

Three.js | WebGL | Javascript

## January 2015

## Course enrollment system

- > A course enrollment system built for Beihang University.
- > Real-time update for seats availability.

Meteor.js MongoDB SPA Javascript

## March 2014

## MistFlat smart plug

- > A remote-controllable smart plug as a startup project.
- > iOS App in Objective-C.
- > Backend prototype in Node.js.

iOS Objective-C Node.js



## **CERTIFICATES**

June 2015 Red Hat Certified Engineer (RHCE)

Red Hat Enterprise Linux Administration

June 2015

Cisco Certified Network Associate (CCNA)

Routing and Switching

## HOBBIES & INTERESTS

I'm a geek and hacker, which means coding is my primary hobby. Coding

I alway put an eye on the cutting-edge technologies and hope to use them in real-world.

Coffee I'm also an enthusiast for (black) coffee.