# Darren (Yu) YANG
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## SUMMARY OF QUALIFICATIONS

An experienced software engineer with 5 years' experience of programming.

B.S. in CS and M.S. in Data Science, Tsinghua University.    M.S. in Technology Innovation, University of Washington.

Experience on AI Machine Learning R&D, Computer Vision, Natural Language Processing.  **I'm available immediately**.

## WORKING EXPERIENCE

**AI Security (Computer Vision) Research Intern** | Baidu USA (Sunnyvale, CA)          June. 2018 – Sept. 2018

Project: AI Security Research on Computer Vision and Object Detector

➢ Proposed an optimization method to craft adversarial examples to attack YOLO object detector with a success rate of 100%.

➢ Put forward a robust physical adversarial sticker generation method based on an extended Expectation over Transformation with a success rate of 0.72. Recognized and verified the effectiveness of a brand new form of "Off-Target Watermark attack".

**Software Engineer Intern** | Microsoft Research Asia (Beijing, China)          Feb. 2017 - Mar. 2017

Project: Intelligent Interactive Indoor Path Guide for people (still serving in 14th Floor, MSRA (Beijing) Office Building No.2).

➢ Developed an interactive frontend web interface to allow users searching paths, adding paths and annotate paths on the map.

➢ Built a manipulator controller on ASP.NET to integrate map digesting & intelligence model, database; deployed on Microsoft Azure.

## SKILLS

➢ Expert Skills: Python, C++, Java;

➢ Advanced Skills: Scikit-learn, TensorFlow, Pytorch; Javascript, CSS, HTML, jQuery, Flask, Nodejs, C#, ASP.NET;

➢ Experience Skills: Git, Docker, Linux(Ubuntu), ROS, Matlab; SQL, MongoDB; OpenCV, Dlib, Gensim;

## PUBLICATION

Building Towards "Invisible Cloak": Robust Physical Adversarial Attack on YOLO Object Detector, **Darren (Yu) Yang**, J. Xiong, X. Li, X. Yan, J. Raiti, Y. Wang, Huaqiang Wu, **Zhenyu Zhong**, IEEE UEMCON 2018, Nov-10, 2018.

## PROJECT EXPERIENCE

**Mobile Web App Dev.** | University of Washington Global Innovation Exchange Project (Seattle, WA) Mar. 2018 - Aug. 2018

Project: Miirabella - A Smart Guide App for Make-up. (Won 2018 Global Innovation Exchange Competition 3rd Prize)

➢ Developed a mobile web application to demo intelligent guidance to assist users to put on makeup easily with python and HTML.

➢ Constructed Face detection and Face Landmark detection to provide interactive real-time feedback using OpenCV and Dlib.

**Backend Architecture Dev. |** Tsinghua Service-oriented-Architecture Project (Beijing, China)        Feb. 2015 – May. 2015

Project: Sina Weibo Search Engine for Social Computing Research

➢ Crawled and Preprocessed Sina Weibo Data with 100 thousand users and 25 million tweets with python.

➢ Built a backend indexing model with pyLucene and deployed it on Alibaba Cloud.

➢ Created a user interface for the query input page and result page to show top 10 related tweets and top 5 related users.

**AI (NLP) Research Assistant |** Tsinghua Summer Research Training (Beijing, China)        July 2015 – Aug. 2015

Project: Human Stress Level Prediction Based on Sina Weibo tweets, Backend Algorithm for an Emotion and Health App

➢ Extracted semantic text features with sentence2vec, image features in Sentibank and user's tag features by clustering and counting.

➢ Evaluated the effectiveness of each features and designed a modified Factorization Machine for final prediction model deployment.

## EDUCATION

**M.S. Degree:** Master of Science in Technology Innovation, University of Washington          Aug. 2016 – Dec. 2018

**M.S. Degree:** Data Science & Information Technology, Tsinghua University          Aug. 2016 – Dec. 2018

**B.S. Degree: Computer Science and Technology**, Tsinghua University          Sept. 2011- July 2016

Relevant Courses: Fundamental of Programming / Data Structure / Fundamental of Object Oriented Programming / Software Engineering / Computer Network / Computer Composition and Design / Information Retrieval / Parallels Computing / Computer Graphics / Introduction to Artificial Intelligence / Machine Learning / Big Data Analysis / Managing Data and Signal Processing / Design Thinking.

**Referees:**  Yuanchao Shu, Researcher at Microsoft Research (Seattle, WA), Email: yuanchao.shu@microsoft.com

Zhenyu Zhong, Staff Security Researcher at Baidu USA (Sunnyvale, CA), Email: edwardzhong@baidu.com