Miles Bai

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Portfolio:
milesbai.com
ieeexplore.ieee.org/author/37085403280
(visa status: Partner of a Student Work Visa)

Summary

I am a Software Engineer with over 7 years of work experience in software development and machine learning. Adept at navigating diverse work environments, I bring valuable technical solutions experience from my tenure at the global 2nd largest video surveillance company where I collaborated within a large team, as well as from a small e-commerce team where I led the development of data pipelines and AI products. Additionally, I hold a Master's degree in Computer Applications from one of China's top postgraduate academies.

Committed to driving innovation and tackling concrete challenges, I am eager to leverage my skill set and experience to contribute to your company's goals.

Skill Highlights

★★★	C / C++	★★☆	Test Driven Development	★★★	computer vision
★★★	Python	★★☆	CMake	★★★	image processing
★★☆	Javascript + CSS	★★★	git / jira	★★☆	torch
★★☆	Swift	★★☆	Jenkins	★★☆	onnx / ncnn

Work Experience

Senior Software Engineer - Jul 2019 to Feb 2023
Taofenba network Inc. Hangzhou, Zhejiang, China - Full Time Employee
In my role with the e-commerce virtual-try-on squad, I provided computer vision solutions for services such as virtual-try-on , fashion analysis and fashion image search. As of June 2023, Taofenba ranks 1st in China on the Virtual-Try-on App ranking list by liqucn.com.

- **Deep Learning on Server**: Developed, integrated and deployed AI services for tasks such as image analysis, face reconstruction, clothing key-points detection and human parsing.
- **Deep Learning on Mobile Phone**: Exported head detection and head pose estimation library for Android and iPhone platforms. Familiar with arm gcc cross-compilation toolchain and a c++ based high-performance library ncnn, which used Arm Neon Intrinsics.
- **Data Pipeline development**: Designed, developed and maintained a python-based fashion image processing workflow system capable of transforming 2000 clothing items (SKUs) into digital assets every day. This system met the requirement of providing content for users to try-on newly launched fashion items on Taobao.
- Mentored junior software engineers and wrote patent.

Data Science Researcher - Sep 2018 to Jan 2019
Megvii Technology Inc. Shanghai, China - Full Time Employee
At Face Recognition squad, my research was primarily focused on enhancing the accuracy of extreme-posed face recognition.

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- Advanced the extreme-posed face alignment method of 4x4 Spatial Transformer Network of GridFace, resulting in an improved identification rate of 77.2%, compared to the previous 75.4% in Multi-PIE dataset's face yaw at 90°.
- Developed, configured and evaluated a face recognition system.

Algorithm Engineer - May 2017 to Sep 2018
Dahua Technology Co. LTD. Hangzhou, Zhejiang, China - Full Time Employee
At Video Behavioral Algorithm squad, I led the development for the people counting task. Multiple surveillance cameras embedded with this AI algorithm were successfully launched in 2018.

- **Software Development:** Integrated, developed and optimized a c++ based people-counting PC software which comprised a detection module, a person tracking module, a false-positive filtering module, and a counting module. The embedded version of this software passed the evaluation of camera product line and embedded into several cameras onwards.
- **Algorithm Development**: Trained and maintained a pedestrian head and shoulder detector and developed a Tensorflow-to-Caffe model converter.
- **Annotation Management**: Managed feedback from specific failure cases, established and updated data annotation guidelines, and checked annotation quality. Conducted regular meetings with the annotation team to ensure high-quality annotations and address queries.

Algorithm Engineer - Jan 2015 to Nov 2016
Miaomiao Image Search Engine. Beijing , China - Full Time Employee

- **E-Commerce Item Detection**: Developed an e-commerce item detection algorithm in detecting 20 classes with a precision of 97% at 89% recall rate.
- **Hand Pose Estimation**: Developed a fast, lightweight hand pose estimation algorithm, which could run at 20fps in Samsung S7 with a RGBD camera.

Education

Master of Computer Applications - Computer Vision - Sep 2011 to Jun 2014

Chinese Academy of Sciences. Beijing, China

Bachelor of Engineering - Automation Engineer Technology - Sep 2007 to Jun 2011

Minzu University of China. Beijing, China

(Won 2nd prize in the Beijing Undergraduate Electronics Design Contest, 2010.)

Certification

Microsoft Azure for .NET Developers - Udemy - Sep 2023