

# Xu YANG

## PERSONAL DATA

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PERSONAL WEBSITE: <https://jasonyangshadow.github.io>  
GITHUB: <https://github.com/jasonyangshadow>  
EMAIL: [yangxu.tokyo@gmail.com](mailto:yangxu.tokyo@gmail.com)  
NATIONALITY: China  
CURRENT REGION: Japan

## EDUCATION

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SEP 2017- APR 2021 Ph.D candidate, Kasahara Lab  
Graduate School of Frontier Science  
The University of Tokyo, Chiba-ken, Japan  
Research Topic: rootless container and workflow system in bioinformatics

SEP 2010-APR 2013 M.S Degree of Engineering, Lab of Intelligent and Distributed Computing  
Graduate School of Computer Science & Technology  
Huazhong University of Science & Technology, Wuhan, China  
Thesis: "Head Pose Estimation via Background Removal"  
Thesis: "A method of head pose estimation via sparse representation<sup>2</sup>"

SEP 2006-JUN 2010 B.S Degree of Engineering, School of Computer Science & Technology  
Huazhong University of Science & Technology, Wuhan, China  
Undergraduate Thesis: "Application of sparse representation in face recognition"

SEP 2006-JUN 2010 B.S Degree of Management, School of Management  
Huazhong University of Science & Technology, Wuhan, China  
Undergraduate Thesis: "Analysis on the feature of author collaboration network & weighted network"

## RESEARCH INTERESTS

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CONTAINER TECHNOLOGY	Interested in design and development of composable rootless container system for scientific research. The motivation is that root privilege is normally not approved by system administrator and most of pipelines employed in bioinformatic research have complex dependencies and runtime environments which will limit their reproducibility. Current famous implementations such as Docker and Singularity are not fully suitable for academic research. <b>Research Period:</b> Doctoral Course(2017.9-2021.4) <b>Keywords:</b> Rootless, container, fake union file system, LD_PRELOAD, fakechroot <b>Project URL:</b> <a href="https://github.com/jasonyangshadow/lpmx">https://github.com/jasonyangshadow/lpmx</a> <b>Tools and Languages:</b> Golang, C
HEAD POSE ESTIMATION	Improved head pose estimation accuracy based on the prediction of background exists in face detection framework. We developed a ground truth database containing manually labeled background area of different head poses, which predicts and eliminates the approximate background of input data thus providing better head pose estimation accuracy. <b>Research Period:</b> Master Course(2010.9-2013.4) <b>Keywords:</b> Machine Learning, Computer Vision, Head Pose Estimation

## WORK EXPERIENCE

AUG 2019 - OCT 2019	<p>Intern of Data Service Team at Preferred Network, Tokyo, Japan</p> <p>Due to the inefficiency of Docker build command, I design and develop an alternative Docker build tool that could generate optimized Dockerfile for Docker Build command so that build time and storage required by Docker are reduced greatly.</p> <p><b>Tools and Languages:</b> Python Docker</p>
JAN 2016-NOV 2016	<p>Project Manager of the Data Service Group at Citigroup Services and Technology Corporation Limited, Shanghai, China</p> <p>Design and develop a log processing and analysis system based on Elastic Stack, collecting and monitoring application log information</p> <p><b>Tools and Languages:</b> Java, Elastic Stack</p>
APR 2013-JAN 2016	<p>Software Engineer of B2B and B2C Group at Travelsky Corporation Limited, Shanghai, China</p> <p>Designed and developed a message-based middleware (Based on ActiveMQ) and air ticket fare system for China Eastern Airlines Corporation Limited. I was in charge of design and development of message platform acting as a fundamental communication infrastructure among the online heterogeneous systems and involved as a core developer to design the logic computing system for air ticket fare calculation</p> <p><b>Tools and Languages:</b> Java, ActiveMQ, Spring MVC, Redis</p>
JUL 2012-SEP 2012	<p>Intern of Online Media Group at Tencent Technology Corporation Limited, Beijing, China</p> <p>Participated in the design and development of backend sub-system of official Tencent auto website (<a href="https://auto.qq.com">https://auto.qq.com</a>).</p> <p><b>Tools and Languages:</b> Python</p>
JUL 2011-JUL 2012	<p>Visiting Researcher at Visual Information Processing and Learning Group (VIPL), Institute of Computing Technology (ICT), Chinese Academy of Sciences (CAS), Beijing, China</p> <p>I continued my research topic on improving the performance and accuracy of head pose estimation.</p>

## REWARDS AND CERTIFICATES

DEC 2014	Project Management Professional PMP, Project Management Institute
FEB 2013	Outstanding Graduate Student, Huazhong University of Science & Technology
DEC 2012	Merit Graduate Student, Huazhong University of Science & Technology
DEC 2012	Outstanding Master Dissertation Award, Huazhong University of Science & Technology
SEP 2010-APR 2013	Graduate Student Full Scholarship, Huazhong University of Science & Technology
JUL 2011	Web Designer, Adobe China Certified Designer
DEC 2008	Software Designer Certification, Computer Technology & Software Qualification Examination

## ACTIVITIES AND SKILLS

OCT 2017-AUG 2020	Student of <a href="#">Global Leader Program for Social Design and Management</a> Graduate School of Public Policy The University of Tokyo
SKILLS	Familiar with C, C++, Golang, Rust, Java, Python programming languages, have experiences on design and development of distributed commercial systems
LANGUAGES	English (fluent), Chinese (native), Japanese (beginner)

## PUBLICATIONS

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- [1] Bingpeng Ma, Xu Yang, and Shiguang Shan. “Head pose estimation via background removal”. In: *International Conference on Intelligent Science and Intelligent Data Engineering*. Springer. 2012, pp. 140–147.
- [2] Xu Yang et al. “A method of head pose estimation via sparse representation”. In: *Chinese Science Paper Online* (2011).