

# YAJIE GU

ygl390@york.ac.uk

+44 7394138983

<https://github.com/rmraaron>

## ABOUT

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I am a fourth-year PhD student in the Department of Computer Science at University of York. I work with Nick Pears in the Vision, Graphics and Learning Research Group. My research interests span computer vision and machine learning, with a emphasis on 3D facial images analysis and modelling. Recently, I focus on implicit representations of 3D facial shapes, 3D human faces identity and expression disentanglement and dense correspondences among 3D shapes.

## EDUCATION

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<b>University of York</b> 4th Year, Ph.D Department of Computer Science	<i>October 2019 - Present</i> York, UK
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<b>Communication University of China</b> M.Engineering Department of Computer Science	<i>2016-2019</i> Beijing, China
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<b>East China University of Technology</b> B.Engineering Department of Software Engineering	<i>2011-2015</i> Nanchang, China
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## WORK EXPERIENCE

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<b>H-M: Computer Vision and Graphics (VICO) [Spring 2022]</b> <i>Jan 2021-Mar 2021</i>	Graduate Teaching assistant
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<b>H-M: Intelligent System 3: Probabilistic and Deep Learning (INT3) [Autumn 2021]</b> <i>Oct 2021-Dec 2021</i>	Graduate Teaching assistant
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<b>IBEX Innovations</b> <i>Jun 2021-Sep 2021</i>	Part-time Intern
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- I was working on supporting the development of a neural network by producing high quality segmentations of voxelised CBCT 3D scans of feet data volumes.

<b>UG2: Vision &amp; Graphics (VIGR) [Autumn 2019]</b> <i>Oct 2019-Dec 2019</i>	Graduate Teaching assistant
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<b>Chinese Cryptography-Oriented Multimedia Copyright Protection, Management, and Access Control Supervision Techniques</b> <i>Sep 2018-Mar 2019</i>	Research assistant
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- I participated in the team named *Side-Channel Attack Based on Deep Learning*, and compared the accuracy of decryption key based on supervised and unsupervised learning approaches.
- CNN was used to analyse existing power consumption (a form of side channel attack in crypt-analysis) data to find secret keys.

**Key Techniques of Personalised Recommendation Systems for Public Digital Cultural Resources**

Research assistant

*Jun 2017-Aug 2018*

- We Proposed a personalised recommender based on Wechat and applied it in Suzhou Public Cultural Center.
- In this recommender, we collected user's online data and user's real visiting data to get their profile. Meanwhile, tag-based algorithm and collaborative filtering were used to generate items for users.
- Node.js was utilised for web page and access to Wechat. Python was used to get results of this recommender.

**CS DC PM, Siemens Factory Automation Engineering Ltd., Beijing, China**

Data Analysis Intern

*Dec 2017-Mar 2018*

- Collecting data from all cooperative companies in an inner tool (GSP), and visualising them in Tableau.
- Collecting and analysing all data from clients, and generating brief documents.
- Making brief presentations about data during the online meetings with colleagues in German Headquarter once a week.

**2017-WISE Commercial Conference, Beijing International Convention Center, China**

Volunteer

*Dec 2017*

- It was held by 36Kr (a technological company in new media), and many renowned researchers in AI were invited to give presentations, such as Kaifu Li, Xiaoping Xu, Justine Cassell, and etc.
- Working as an assistant and printing handouts for the conference, and arranging the schedule for Bo Ding (Vice President of Wangyiyun - a very popular music app).

## **PUBLICATIONS**

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Gu, Y., Pears, N., & Sun, H. Adversarial 3D Face Disentanglement of Identity and Expression. In International Conference on Automatic Face and Gesture Recognition 2023. IEEE.

Sun, H., Pears, N., & Gu, Y. Information Bottlenecked Variational Autoencoder for Disentangled 3D Facial Expression Modelling. In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (pp. 157-166).

Zhou, J., Gu, Y., & Lin, W. (2019, August). Complementing Travel Itinerary Recommendation Using Location-Based Social Networks. In 2019 IEEE SmartWorld, Ubiquitous Intelligence & Computing, Advanced & Trusted Computing, Scalable Computing & Communications, Cloud & Big Data Computing, Internet of People and Smart City Innovation (SmartWorld/SCALCOM/UIC/ATC/CBDCom/IOP/SCI) (pp. 1876-1881). IEEE.

Jia, Q., Zhou, J., Gu, Y., Liu, S., & Wu, J. (2018, December). Supporting Movie Production: A Recommender Approach. In 2018 IEEE 4th International Conference on Computer and Communications (ICCC) (pp. 2273-2277). IEEE.

Gu, Y., Zhou, J., & Liu, S. (2018, October). An improved recommender for travel itineraries. In International Conference on Intelligent Information Processing (pp. 223-235). Springer, Cham.

Gu, Y., Zhou, J., Feng, H., Chen, A., & Liu, S. (2018, June). A recommender for personalized travel itineraries. In International Conference on Cloud Computing and Security (pp. 277-288). Springer, Cham.

## **PROGRAMMING SKILLS**

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Python, C++, Node.js, Matlab, LaTeX