curriculum vitæ of
Chuan Guo

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EDUCATION

Ph.D. & Msc in Software Engineering and Intelligent Systems   UNIVERSITY OF ALBERTA, CANADA

Sep. 2019 – Present

Dept. of Electrical and Computer Engineering

- Overall GPA: **3.93/4.0**
- Supervisor: Professor Li Cheng
- Research Interest: Artificial Intelligence, Computer Vision, Human behavior Modelling

B.Eng. in Software Engineering (Pilot Program)   JILIN UNIVERSITY, CHINA

Sep. 2013 – Jul. 2017

College of Software

- Overall GPA: **89.57/100**
- Academic Ranking: **1/30** (in the program)

EXPERIENCE

Jan. 2021 – Present   Ottawa IC Lab, HuaWei   EDMONTON, CANADA

Associate Researcher Intern. Mentor: Wei Lu

Sep. 2019 – Present   Vision and Learning Lab, University of Alberta   EDMONTON, CANADA

Research Assistant. Supervisor: Professor Li Cheng

Mar. 2019 – Aug. 2019   Wangle Hulian Beijing Technology Co.Ltd   BEIJING, CHINA

Algorithm Engineer. Mentor: Haibo Gu

Sep. 2017 – Mar. 2019   Institute of Computing Technology, Chinese Academy of Sciences   BEIJING, CHINA

Research Assistant. Mentor: Juan Cao

PROJECTS

Jan. 2021 – Present   **Language Grounded 3D Human Behavior Modeling and Understanding**   UNIVERSITY OF ALBERTA

1. Aimed to synthesize 3d human behaviors from text description or in the inverse way, i.e. understanding human behaviors by texts.
2. Constructed and annotated so-far the largest human motion-language dataset, with 15k motions captioned by 50k descriptions.
3. A new framework of generating realistic human motion with conditional VAE and recurrent networks was developed.
4. One first-author paper was submitted to CVPR 2022.

Sep. 2019 – Jan. 2021   **3D Human Action and Video Generation**   UNIVERSITY OF ALBERTA

1. The topic is to generate human behaviors conditioned on action categories.
2. Synthesized visually pleasing human motions by a novel VAE-based (i.e. Variational AutoEncoder) network with Lie pose representation, and curated own dataset (Demo Webpage).
3. Built up a novel pipeline to generate human videos from action type & single image with graphics & machine learning apparatus.
4. One first-author paper published on ACM MultiMedia 2020[3], and another is accepted to IJCV[2].

Sep. 2017 – Mar. 2019   **Fake News Detection on Social Media**   ICT, CHINESE ACADEMY OF SCIENCES

1. Designed, implemented and deployed algorithms for a real-time online fake news detection system[1].
2. Exploited the roles of emotion, visual/textual content and propagation for news credibility evaluation.
3. Developed a distributed crawling system that collected over 10 million posts from Weibo platform.
4. A pre-print first-author paper "Exploiting Emotions for Fake News Detection on Social Media"[4].

[0] The program selected **top 30** students amongst 281 in the 1st school year.

[1] newsverify.com

Apr. 2015 – Apr. 2016	**National Undergraduate Innovative Training Project**	JILIN UNIVERSITY

1. Developed a landscape recommendation system based on image retrieval method.

2. Adopted *Bag of Features* for image representation and *KD-Tree* for high-dimensional feature retrieval.

3. Published two papers[13,4], one software copyright[5] and was awarded as **Outstanding Project**.

HONORS & CONTEST

Nov. 2021	**Alberta Graduate Excellence Scholarship**	UNIVERSITY OF ALBERTA
Oct. 2016	**Qihoo 360 Scholarship** (top 5 out of 1000)	JILIN UNIVERSITY
Nov. 2015	**National Scholarship** (top 5 out of 281)	MINISTRY OF EDUCATION
Dec. 2015	Excellent Student of Jilin University	JILIN UNIVERSITY
2014, 2015	Second-level Scholarship of Jilin University	JILIN UNIVERSITY
2015, 2016	College Excellent Student	JILIN UNIVERSITY
May 2015	The 1_{st} Prize in *Jilin Provincial Mathematical Contest in Modeling*	JILIN PROVINCE

SKILLS

Programming Languages: Python, C, C++, Java, C#, Matlab, R, HTML and Latex.
Technologies: PyTorch, Keras, SciPy, NumPy, Pandas, Scikit-learn, Weka, Jieba, UNIX, Git, Unity
Natural Languages: English, Chinese (mother language)

PUBLICATIONS

1. Shihao Zou, **Chuan Guo**, Xinxin Zuo, Sen Wang, Pengyu Wang, Xiaoqin Hu, Shoushun Chen, Minglun Gong, Li Cheng. "EventHPE: Event-based 3-D Human Pose and Shape Estimation." IEEE International Conference on Computer Vision. 2021.

2. **Guo Chuan**, Xinxin Zuo, Sen Wang, Xinshuang Liu, Shihao Zou, Minglun Gong, and Li Cheng. "Action2Video: Generating Videos of Human 3D Actions." International Journal of Computer Vision (Accepted in Nov). 2021.

3. **Guo Chuan**, Xinxin Zuo, Sen Wang, Shihao Zou, Qingyao Sun, Annan Deng, Minglun Gong, and Li Cheng. "Action2Motion: Conditioned Generation of 3D Human Motions." In Proceedings of the 28th ACM International Conference on Multimedia, pp. 2021-2029. 2020.

4. **Guo Chuan**, Juan Cao, Xueyao Zhang, Kai Shu, and Miao Yu. "Exploiting emotions for fake news detection on social media." arXiv preprint arXiv:1903.01728 (2019).

5. Ji, Kaixuan, **Chuan Guo**, Shengfu Zou, Yang Gao, and Hongwei Zhao. "Image Retrieval Algorithm Based on Feature Fusion and Bidirectional Image Matching." In 2015 4th National Conference on Electrical, Electronics and Computer Engineering. Atlantis Press, 2015.

6. Zou, Shengfu, **Chuan Guo**, Kaixuan Ji, Yang Gao, and Hongwei Zhao. "Design and Implementation of Tourist Landmarks Recommending System." In 2016 3rd International Conference on Materials Engineering, Manufacturing Technology and Control. Atlantis Press, 2016.

7. Jilin University. Landscapes Recommendation System V1.0[CP/CD]. Copyright Number: 2015SR259762