

EDUCATION

- Sep. 2019 – Dec. 2023 **Ph.D. candidate** in Software Engineering and Intelligent Systems UNIVERSITY OF ALBERTA, CANADA
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
- Sep. 2013 – Jul. 2017 **B.Eng.** in Software Engineering (Pilot Program) JILIN UNIVERSITY, CHINA
College of Software
- Overall GPA: **89.57/100**
 - Academic Ranking: **1/30** (in the program)

EXPERIENCE

- Sep. 2019 – Present Vision and Learning Lab, University of Alberta EDMONTON, CANADA
Research Assistant. Supervisor: Professor Li Cheng
- Nov. 2022 – Present Huawei Technologies Canada Co., Ltd. TORONTO, CANADA
Associate Researcher Intern. Mentor: Juwei Lu
- Jan. 2021 – Jan. 2022 Huawei Technologies Canada Co., Ltd. EDMONTON, CANADA
Associate Researcher Intern. Mentor: Wei Lu
- Jun. 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 descriptions or in the inverse way, i.e. understand human behaviors through texts.
 2. Annotated so-far the largest motion-language dataset, with 15k motions captioned by 50k descriptions.
 3. A novel approach that generates realistic human motion with temporal VAE and RNNs (Demo) [4].
 4. Built mutual mappings between 3D human motions and texts, motion captioning and text2motion generation respectively, using vector quantization and Transformers. [2]
- 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) [8].
 3. Built up a novel pipeline to generate human videos from action type & single image with graphics & machine learning apparatus (Demo) [6].
- 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 system¹.
 2. Exploited the roles of emotion, multimodal contents and propagation for news credibility [9].
 3. Developed a distributed crawling system that collected over 10 million posts from Weibo platform.
- Apr. 2015 – Apr. 2016 **National Undergraduate Innovative Training Project** JILIN UNIVERSITY
1. Developed a landscape recommendation system based on image retrieval method [10].
 2. Adopted *Bag of Features* for image representation and *KD-Tree* for high-dimensional feature retrieval.

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

¹newsverify.com

HONORS & CONTEST

Feb. 2023	Alberta Innovate Graduate Scholarship (31000 CAD)	UNIVERSITY OF ALBERTA
Nov. 2021	Alberta Graduate Excellence Scholarship (12000 CAD)	UNIVERSITY OF ALBERTA
Oct. 2016	Qihoo 360 Scholarship (top 5 out of 1000, 10000 RMB)	JILIN UNIVERSITY
Nov. 2015	National Scholarship (top 5 out of 281, 8000 RMB)	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 <i>Jilin Provincial Mathematical Contest in Modeling</i>	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] Gong, Kehong, Dongze Lian, Heng Chang, **Chuan Guo**, Xinxin Zuo, Zihang Jang and Xinchao Wang. "TM2D: Bimodality Driven 3D Dance Generation via Music-Text Integration." Preprint. 2023.
- [2] **Guo, Chuan**, Xinxin Zuo, Sen Wang, and Li Cheng. "TM2T: Stochastic and Tokenized Modeling for the Reciprocal Generation of 3D Human Motions and Texts." European conference on computer vision (ECCV). 2022.
- [3] Zou, Shihao, Xinxin Zuo, Sen Wang, Yiming Qian, **Chuan Guo**, and Li Cheng. "Human Pose and Shape Estimation from Single Polarization Images." IEEE Transactions on Multimedia (2022).
- [4] **Guo, Chuan**, Shihao Zou, Xinxin Zuo, Sen Wang, Wei Ji, Xingyu Li, and Li Cheng. "Generating Diverse and Natural 3D Human Motion from Text." In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR). 2022.
- [5] Ji, Wei, Jingjing Li, Qi Bi, **Chuan Guo**, Jie Liu, and Li Cheng. "Promoting Saliency From Depth: Deep Unsupervised RGB-D Saliency Detection." In International Conference on Learning Representations. 2022.
- [6] **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 (2022): 1-31.
- [7] Zou, Shihao, **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, pp. 10996-11005. 2021.
- [8] **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.
- [9] **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).
- [10] Jilin University. Landscapes Recommendation System V1.0[CP/CD]. Copyright Number: 2015SR259762