curriculum vitæ of
Chuan Guo
https://ericguo5513.github.io/ cguo2@ualberta.ca
+1 587 372 8931 google scholar

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: Prof. Li Cheng

Nov. 2022 – Dec. 2023 Huawei Technologies Canada Co., Ltd. Toronto, Canada
Associate Researcher Intern. Mentor: Dr. 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

Oct. 2016 – Mar. 2019 Institute of Computing Technology, Chinese Academy of Sciences Beijing, China
Research Assistant. Mentor: Dr. Juan Cao

Projects

Dec. 2021 – Present **Generative Human Motion Stylization** Huawei Technologies Canada

1. The goal is to stylize an existing 3D motion with style clues from for example, motion, label or priors.
2. Found that stylizing motion in latent space is more efficient than in pose space.
3. Designed a generative framework which enables diverse and novel stylization (Demo) [1].

Jan. 2021 – Dec. 2022 **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) [6].
4. Built mutual mappings between 3D human motions and texts, motion captioning and text2motion generation respectively, using vector quantization and Transformers. [4]

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) [10].
3. Built up a novel pipeline to generate human videos from action type & single image with graphics & machine learning apparatus (Demo) [8].

Oct. 2016 – Mar. 2019 **News Credibility Evaluation on Social Media** ICT, Chinese Academy of Sciences

1. Designed, implemented and deployed algorithms for a real-time online news verification system[1].
2. Exploited the roles of emotion, multimodal contents and propagation for news credibility [11].
3. Developed a distributed crawling system that collected over 10 million posts from Weibo platform.

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

Honors & Contest

Jul. 2023	**J Gordin Kaplan Graduate Student Award** (1500 CAD)	University of Alberta
Feb. 2023	**Alberta Innovate Graduate Scholarship** (31000 CAD)	Alberta Province
Nov. 2021	**Alberta Graduate Excellence Scholarship** (12000 CAD)	Alberta Province
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 *Jilin Provincial Mathematical Contest in Modeling*	Jilin Province

Publications

[1] **Guo, Chuan**, Yuxuan Mu, Xinxin Zuo, Peng Dai, Youliang Yan, Juwei Lu, Li Cheng. "*Generative Human Motion Stylization in Latent Space*." In International Conference on Learning Representations (ICLR). 2024. (Accept rate: 31%)

[2] Nhat M. Hoang, **Chuan Guo**, Michael Bi Mi and Kehong Gong. "*MotionMix: Weakly-Supervised Diffusion for Controllable Motion Generation.*" The 38th Annual AAAI Conference on Artificial Intelligence (AAAI). 2024 (Accept rate: 23.75%)

[3] 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*." IEEE International Conference on Computer Vision. 2023. (Accept rate: 26.7%)

[4] **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. (Accept rate: 28%)

[5] 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).

[6] **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. (Accept rate: 25.3%)

[7] 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 (ICLR). 2022. (Accept rate: 32%)

[8] **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.

[9] 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 (ICCV), pp. 10996-11005. 2021. (Accept rate: 25.9%)

[10] **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. (Accept rate: 27.8%)

[11] **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).

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