Liu Peng

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"Where there is a will, there is a way"

Personal Profile

I received my Bachelor degree in Computer Science and Technology from the Hebei University of Technology (211), with awarded outstanding graduate. In my Bachelor thesis, I studied the generative model systematically, and used diffusion model for Chinese painting generation. I have read a lot of materials related to artificial intelligence, including books, blogs and papers, etc. I also have learnt many courses such as Stanford CS 231N for Computer Vision and CS 224N for Natural Language Processing, etc. Now, I am looking for a research assistant job (about 2 years) related to my research interests. I sincerely hope to have the opportunity do some meaningful work and publish papers on top conferences.

Research Interests

Generative Models, Multimodal, Foundation Model

Education

Hebei University of Technology   *Tianjin, China*
B.Eng. in Computer Science and Technology, GPA 3.8/4   *August 2019 -June 2023*
- Outstanding graduate of HEBUT
- Changed major to computer science and technology (Only two members)
- Turned down the opportunity for postgraduate recommendation
- A Member of Communist Party of China (CPC)

Work Experience

Scorching Stone Technology   *Beijing, China*
Algorithms Engineer   *Oct 2023 - Current*
- Use diffusion model to genereate controllable e-commerce picture.
- Locating and solving the problem of poor Chinese face generation.
- Locating and analyzing the blank background problem in inpainting mode.

Thesis

Generative Models Research and Chinese Painting Generation   *Tianjin, China*
Hebei University of Technology   *Jan 2023 - June 2023*
- Systematic learning of mainstream generative models
- Flow-based model, Autoregressive model, Energy-based model, VAE, Diffusion model, GAN
- Use diffusion model for Chinese painting generation
- Read a lot of materials

Skills

Programming   Python (Pytorch, TensorFlow, PaddlePaddle, Scikit-Learn), C/C++, C#, Java, SQL, HTML, MATLAB
Miscellaneous   Git, LaTeX, Markdown, Linux, Vim, Microsoft Office

Achievements

2023	**Outstanding graduate of HEBUT**, All aspects	*Tianjin, China*
2023	**Innovation training program for college students**, AI +Fiance, Leader, Province-level	*Tianjin, China*
2022	**Entrepreneurship training program for college students**, Software, Leader, Province-level	*Tianjin, China*
2021	**First-class scholarship of Hebei University of Technology,** Grades and extracurricular activities	*Tianjin, China*
2021	**Merit student of Hebei University of Technology,** All aspects	*Tianjin, China*
2020	**First-class scholarship of Hebei University of Technology,** Grades and extracurricular activities	*Tianjin, China*
2020	**Merit student of Hebei University of Technology,** All aspects	*Tianjin, China*

Motivation

In a long run, I believe that the real artificial intelligence will come true, which will liberate productivity and enable people to live better lives. I would like to devote myself to the research on artificial intelligence.

Languages

Chinese Native
English CET6, Proficient in reading

Advantages

Broaden AI Knowledge By learn lots of materials
Passion for AI I would like to devoted my self to artificial intelligence research
Solid theoretical foundation For some technology, I always want to explore the rationale behind it (My thesis is math heavy)
Thinking and reading skills I have read lots of English books, papers etc.
Self-Motivation Passionate about artificial intelligence

Have Learnt Courses

- Stanford CS 231N Deep Learning for Computer Vision, 2017 version and new content in 2023 version.

- Stanford CS 224N Natural Language Processing with Deep Learning, 2023 version

- MIT 6.S191 Introduction to Deep Learning

- Westlake Natural Language Processing Course in Spring 2023

Have Read Books

- Machine Learning (By Zhou Zhihua) (In Chinese)

- Statistical Learning Method (By Li Hang) (In Chinese)

- The Quest for Machine Learning (By Zhu Geyue, Calabash Brothers) (In Chinese)

- Hands-On Machine Learning with Scikit-Learn, Keras & TensorFlow (Aurélien Géron)

- Deep Learning with Python (By Francois Chollet) (Partially)

- Deep Learning with PyTorch (By Eli Stevens, Luca Antiga, Thomas Viehmann) (Partially)

- Computer Vision Algorithms and Applications (By Richard Szeliski)

- Generative Deep Learning (By David Foster) (Partially)

- Deep Learning (By Ian Goodfellow, Yoshua Bengio, and Aaron Courville)

- Deep Generative Modeling (By Jakub M. Tomczak)

- Natural Language Processing A Machine Learning Perspective (By Yue Zhang, Zhiyang Teng)

- Dive into Deep Learning (By Aston Zhang, Zack C. Lipton, Mu Li, and Alex J. Smola) (PyTorch Version)

Have read papers

I have read dozens of papers about generative models, including diffusion series and gpt series. Here are some examples.

1. Denoising Diffusion Probabilistic Models

2. Denoising Diffusion Implicit Models

3. Diffusion Models Beat GANs on Image Synthesis

4. Deep unsupervised learning using nonequilibrium thermodynamics

5. Classifier-Free Diffusion Guidance

6. Diffusion Models: A Comprehensive Survey of Methods and Applications

7. Generative Modeling by Estimating Gradients of the Data Distribution

8. GLIDE: Towards Photorealistic Image Generation and Editing with Text-Guided Diffusion Models