



学术论文审稿及撰写经验分享

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Department of Computer Science

哈尔滨工业大学（深圳）

Harbin Institute of Technology, Shenzhen

◆个人经历

张海军 哈工大（深圳）教授、博士生导师

学历背景

1. 东北大学学士、硕士，香港城市大学博士
2. 2010年10月至2011年12月加拿大温莎大学博士后
3. 2010年3月至2010年6月美国马里兰大学访问学者

学术成绩

1. 在IEEE/ACM Trans.等国际重要期刊和会议发表论文150余篇
2. 获得中国自动化学会自然科学一等奖1项、广东省自然科学二等奖1项
3. 拥有美国、日本、中国等国家授权发明专利20余项
4. 出版专著1部：《时尚智能：理论、技术及应用》

学术兼职

1. IEEE Transactions on Consumer Electronics, Neural Computing & Applications, Neurocomputing等国际知名期刊编委
2. IEEE ISPCE-Asia和NCAA国际会议主席
3. 亚太认知智能学会（AACI）秘书长



18+年论文写作经验

学生培养

1. 研究方向：数据挖掘、机器学习、多媒体AI
2. 已毕业40余名硕士研究生（90%大厂工作）
3. 已培养博士5名（高等院校工作）
4. 在读学生：博士生7名、硕士生14名

一

论文涉众角色

二

论文的做与写

三

发表源的选择

四

工程期刊论文

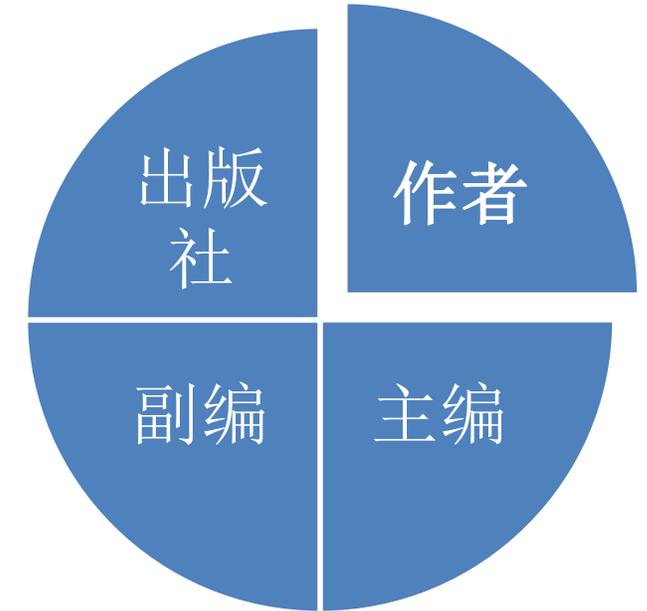
五

撰写实战训练

一、论文涉众角色-角色关系

论文发表过程一般涉及的角色

- **出版社编辑**
 - ✓ 受雇于出版社/服务性工作
- **责任主编 (EiCs)**
 - ✓ 名气、负责监控整个流程
- **责任副编 AEs**
 - ✓ 负责找审稿人、监控/推动审稿过程、给出初步意见
- **论文作者**
 - ✓ 论文第一责任人 (出版前和出版后)



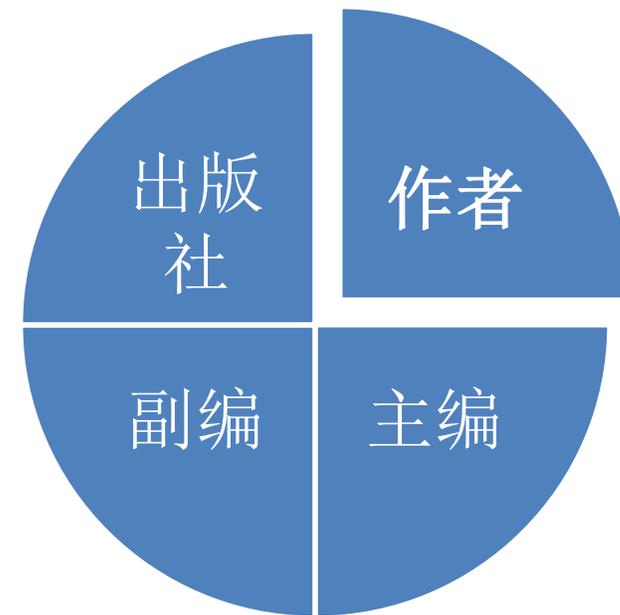
编辑AE的角色

- **Overlap rate检测** (iThenticate, 小于25~30%才会送审)
- **Format** (格式问题, 作者, email等等)
- **论文梗概** (理论和实验是重点关注部分)
- **期刊关联性** (topics)
- **Assign审稿人** (一般系统推荐, 选择6+人)
 - ✓ 根据审稿人的意见做初步decision
 - ✓ 监控审稿人的行为 (是否有unethical)

一、论文涉众角色-角色关系

审稿人的角色

- “运气”使然
 - ✓ 认真的VS繁忙的
 - ✓ 小同行VS大同行
 - ✓ “敌人” VS “朋友”
- 共性关注点
 - ✓ writings, 格式, 图, 表
 - ✓ 新问题/老问题, 核心框架和方法
 - ✓ 验证的效果, 对比实验的方法
 - ✓ 参数分析充分, 有无理论分析
 - ✓ 技术有无漏洞



作者的角色

- 调整心态
 - ✓ 编辑和审稿人是自愿服务, 帮助提高论文的质量
- 尊重编辑和审稿人
 - ✓ Be polite & confident
- 核心: 提高自己文章的质量

一、论文涉众角色-发论文的目的

为什么写论文?

- 学校、学院规定-毕业要求*
- 找工作, 丰富简历**
- 升学深造, 打动未来导师***
- 职级晋升、项目需求***

被动式写作

- 研究成果分享: 告诉别人自己的最新研究发现、为别人提供研究灵感、启发
 - 每个人小时候的梦想-成为“科学家”
 - 经过同行评议, 成为别人的参考文献
 - 在某个研究方向上做一点自己的贡献
 - 某些方法被业界采用
 - 提出一些具有远见、看似无法实现的想法

主动式写作

论文-基础研究的产物

- 大多数基础理论研究和实际工业应用相差较远
- 人类科技的进步是由基础“论文”不断迭代最终推动技术进步
 - 人脸识别、深度学习

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二、论文的做与写

论文的做：

- 有核心的想法
- 有具体的理论/方法/算法
- 有理论证明或实验结果

难! ---需要基础+兴趣+灵感+努力+运气

论文的写：

- 具备良好的语言（中文和外文）表达能力
- 有目标期刊或会议
- 具有模仿（学习）能力

易! ---只要方法+练习

如何分配做和写：

- 根据文章类型不同，做和写用的时间比例不同（以工程类为例）
 - 期刊类型：50% vs. 50% (做|写)
 - 会议类型：70% vs. 30% (做|写)
- 根据个人能力不同，“做”和“写”用的时间比例亦不同
- 一般情况：“做”和“写”所用的时间随时间衰减，“写”衰减的更快

“做” > “写”
ALWAYS!

二、论文的做与写

论文的“做”的一般过程：

- 不同的学者有不同的做法



无固定模式

TPIC (from Prof. Zhihua Zhou) :

- Topic (研究主题)
- Problem (研究问题)
- Idea (核心方法)
- Concrete work (具体工作)
 - ✓ Theoretical analysis, experiments, etc.



Zhi-Hua Zhou

[Nanjing University](#)
Verified email at nju.edu.cn - [Homepage](#)
[Artificial Intelligence](#) [Machine Learning](#) [Data Mining](#)

SCOPE (from Dr. Weizhi Meng) :

- Selection (筛选)
- Challenge (挑战)
- Original (创新)
- Proposal (方案)
- Evaluation (实现/评价)



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<http://www.staff.dtu.dk/weme>

Source: Weizhi Meng, Tutorial, in International Conference on Neural Computing for Advanced Applications (NCAA), 2023

二、论文的做与写

TPIC

- Topic (研究主题) :

- Computer science has developed to this day and is already a very vast subject (以计算机学科为例)
- First enter a specific sub-discipline and field, and acquire the necessary understanding (首先进入一个具体的子领域, 具备基本认知)

- Computer Science

- Artificial Intelligence

- Automated Reasoning (?)
- Computer Vision (?)
- Knowledge Engineering (?)
- Knowledge Representation (?)
- Machine Learning (?)
- Multi-agent System (?)
- Natural Language Processing (?)
- Pattern Recognition (?)
- Planning (?)
- (?)

- Computer Graphics

- Database

- Hardware

- Multimedia

- Network

- Software Engineering

- Theoretical Computer Science

-



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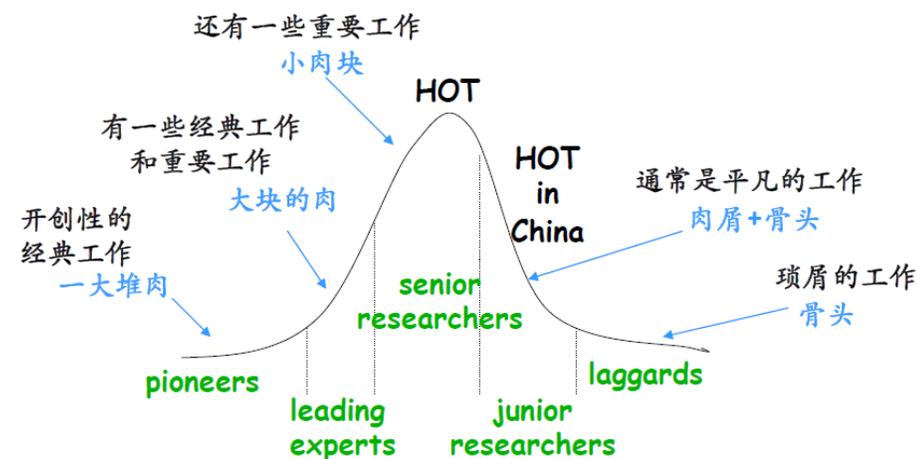
二、论文的做与写

TPIC

- Problem (研究问题) :

- “Question” is the heart of scientific research! (解决什么是科学研究的核心)

- Any worthwhile research is to solve a problem. Asking a good question is already half the battle. This is probably the most difficult part of CS research. Finding problem is a sign of independent research ability (会问问题和找问题)



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Artificial Intelligence Machine Learning Data Mining

二、论文的做与写

TPIC

- Idea (核心方法) :
 - This is the time to test your ingenuity (独创性)
 - Do not expect your mentor | supervisor to give you ideas! (导师)
 - What if the supervisor even gave you an idea?
 - If you cannot think of a good idea at once, do not worry if you can do an important job during your doctoral/master's study. You may have a lot of ideas, and your advisor can help you judge and improve them. With a good idea, the problem will be solved almost. (想法的多寡)



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[Artificial Intelligence](#) [Machine Learning](#) [Data Mining](#)

二、论文的做与写

TPIC

- Concrete work (具体工作) :
 - Idea needs to be supported (验证想法)
 - ✓ CS usually includes theoretical analysis and experimental verification (理论分析&实验验证)
- Neither is easy
 - By the time the Ph.D. is finished, at least in some respects it should be handy (奠定一些基础)



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二、论文的做与写

SCOPE

- Selection (筛选) :

- There are currently a large number of papers

- ✓ How to filter (keyword?)

- Abstract (摘要)

- Conclusion (结论)

- Relevance (相关性)

- Conference reputation (会议声誉)

- Journal reputation (期刊声誉)

- Level of detail (experiment, demonstration) (细节详略程度)

DBLP (keyword: Blockchain)

refine by type

Conference and Workshop Papers (7,587)

Journal Articles (6,312)

Informal and Other Publications (2,191)

Books and Theses (89)

Editorship (81)

Parts in Books or Collections (79)

Withdrawn Items (25)

Reference Works (1)

Data and Artifacts (1)



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二、论文的做与写

SCOPE

- Challenge (挑战):

- Not only to identify the "problem", but also to identify the "challenge"! (conference, journal level)

(除了定位问题, 还要定位现存挑战)

- 'Challenge' decides your work where to go!

- ✓ Current Hotspots - Follow/Lead

- ✓ Old hot spots - new ideas

- ✓ Recognized Challenge (Best Paper)

- ✓ History Level Challenge (Nobel Prize)

- ✓ New Field

(解决什么挑战决定文章的质量)

- Distributed Consensus & Fault Tolerance Algorithms
- Performance, Scalability Issues
- Distributed Database Technologies for Blockchain
- Blockchain Interoperability and Cross-chain mechanisms
- Blockchain Platforms
- Decentralized App Development, DAPPs, and Services
- Smart Contracts and Verification
- Security, Privacy, Attacks, Forensics
- Transaction Monitoring and Analysis
- Regulations & Policies in Cryptocurrency
- Novel Mechanisms for the Creation, Custody, and Exchange of Cryptoassets
- Anonymity and Criminal Activities of the Cryptocurrency
- Managing the Risks of Cryptocurrency
- Distributed Trust
- Decentralized Internet Infrastructure
- Decentralized Financial Services
- Blockchain for Internet of Things/Cyber Physical Services
- Blockchain social media platforms/tokens
- Blockchain and Machine Learning/Artificial Intelligence



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二、论文的做与写

SCOPE

- Original (创新):
 - Propose innovative approaches to “challenges” -idea! (conference, journal level) (创新方法)
 - Requires software and hardware support ! (软硬件条件)
 - ✓ Own interest (兴趣)
 - ◆ The most important! Long-term study
 - ✓ Own knowledge structure (知识积累)
 - ◆ The degree of knowledge accumulation, a lot of reading
 - ✓ Access to the necessary resources (现有基础)
 - ◆ •e.g., data, experimental platform
 - ✓ Working years (研究年限)



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二、论文的做与写

SCOPE

- Proposal (方案):
 - A good idea is just the beginning and needs a specific work plan!
(conference, journal level) (从想法到实现)
 - Essentials of a good plan (研究计划要素) :
 - ✓ Background research (背景调研)
 - ✓ Clear contribution points (贡献)
 - ✓ How to support (theory, experiment) (验证)
 - ✓ Construction of demonstration platform (Demo演示)
 - ✓ Comparison of similar methods (对比)
 - ✓ In-depth discussion, reflection (讨论)



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二、论文的做与写

SCOPE

- Evaluation (方法评测):

- How to implement determines the depth of the article (实现的重要性)
- Theoretical analysis (理论分析) :
 - ✓ Thorough, no loopholes (全面)
 - ✓ Formal as much as possible (正式)
 - ✓ As a simple tool as possible (简洁)
- Experimental verification (实验验证) :
 - ✓ Benchmarks (数据集) / Data open source (开源平台)
 - ✓ Indispensable comparisons (方法对比)
 - ✓ Experiments are reproducible (可重复性)

- Necessary Analysis and Interpretation

- (分析与解释) :

- ✓ Strength/weakness
- ✓ How/When strong?
- ✓ Why strong?
- ✓ How/When weak?
- ✓ Why weak?



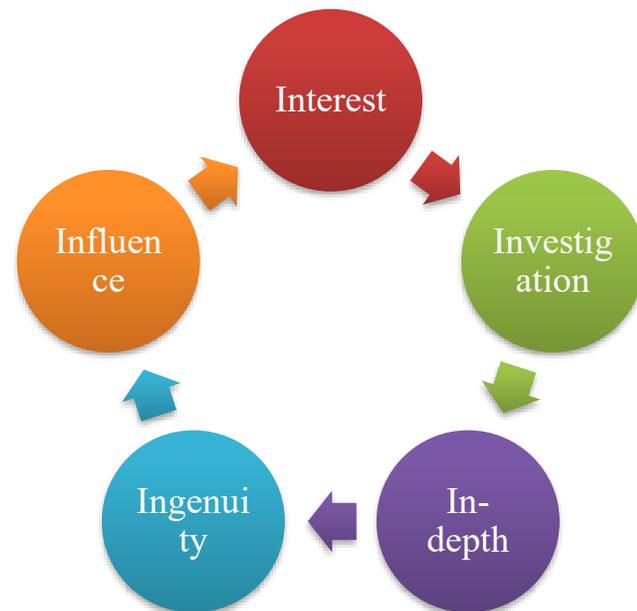
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二、论文的做与写

5INs (个人见解)

- Interest (兴趣)
 - 研究有的时候是非常枯燥的，需要很强的兴趣驱动
- Investigation (调研)
 - 作为初学者，需要大量的调研，先看看别人做了什么、思路、方法
 - ✓ 多与导师(年轻、资深)、同门交流、听讲座
 - ✓ 搜索资源：[Google Scholar](#)、[知乎](#)、[Github](#)
- In-depth (深入)
 - 开始的时候，期望不要太高，循序渐进，从“小”创新到“大”创新，深刻理解问题

- Ingenuity (独创性)
 - 创新不一定分“大”和“小”，但一定有“独特”与否之分
- Influence (影响力)
 - 目标先是影响自己，然后是影响别人，终极是影响社会



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三、发表源的选择

论文主要发表类型：

- 会议

- 发表周期短 (review一般2个月, 个别有rebuttal环节)
- 见刊速度快 (检索速度快, 一般会议后3-6个月)
- 不是很formal的出版物 (少见撤稿等)
- 注册费、现场开会 (可能涉及到出国手续)
- 页数有限制 (6-8页双栏)
- 会议投稿系统 (EasyChair, OpenReview, Edas)

- 期刊

- 发表周期不定
 - ✓ 传统刊发表周期一般较长 (2-3轮审稿)
 - ✓ 新刊较短 (Open Access, 出版费2万+)
- 正式formal出版物 (正视comment, 撤稿等)
- 页数一般无限制 (投稿时某些有限制)

不同学科认可度不同

三、发表源的选择

期刊为例：

- 不同期刊具有不同的写作风格
 - Nature/Science
 - PNAS/Nature Communications
 - IEEE Trans.
- 发表文章类型不同
 - Review/surveys
 - Magazine
 - Short Papers/brief papers/communications/comments
 - Invited papers
 - ✓ 例如Proceedings of the IEEE
 - Full-length Technical Papers
 - ✓ 有些侧重理论 (Machine Learning, JMLR, IEEE Trans. Information Theory)
 - ✓ 有些侧重工程实践 (大部分IEEE Trans., Pattern Recognition, Neural Computing & Applications)
 - Special issues
 - ✓ 发表周期确定, 一般较快
 - ✓ 主题需要非常相关
 - ✓ 大部分可能是'Invited'
 - ✓ 咨询导师
- 不同出版社排版格式、系统提交要求不同
 - Springer/Elsevier/IEEE
 - 使用**学校正式Emails** (注意Check垃圾邮箱)
 - 作者**署名、顺序**一旦确定, 建议不要更改
 - 不要轻易Withdraw

三、发表源的选择

发表论文规划:

• 如何选择

- 课题组推荐的列表
- 咨询导师
- 课题组其他同门发表的经历
- 互联网
 - ✓ 知乎
 - ✓ Letpub
- 衡量自己论文的创新和质量
 - ✓ 不同人发表体验均不同 (不确定性的好处)
 - ✓ 运气成分

• 会议

- 有投稿时间要求, 尽早规划

• 期刊

- 无投稿时间要求
- 返修有时间要求
 - ✓ 大修Major Rev一般6-7Weeks
 - ✓ 小修Minor Rev一般2-4Weeks

LetPub助力中国作者成功发表顶尖期刊! Nature, Science, PNAS 等诸多顶刊作者特别感谢LetPub语言编辑贡献。 [了解更多](#)

按研究方向查看:
按SCI期刊研究方向查看: [请点击展开](#)

Computing and Software for Big Science
OA 期刊
Springer

特刊征稿
光学与电子光学期刊 Optik
多维图像复原最新进展
Impact Factor 3.4

NEURAL COMPUTING & APPLICATIONS期刊基本信息
Hello, 您是该期刊的第499743位访客

基本信息	NEURAL COMPUTING & APPLICATIONS	LetPub评分
期刊名字	NEURAL COMPUT APPL (此期刊被最新的JCR期刊SCIE收录)	7.8 ★★★★★ 269人评分 我要评分
		声誉: 8.0
		影响力: 7.5
		速度: 7.3



2024 International Conference on Neural Computing for Advanced Applications
July 5-7, 2024, Guilin, China

Important Dates

- March 1, 2024 (11:59 pm, Pacific Standard Time): Full Paper Due
- May 14, 2024: Notification of Accept/Reject
- May 20, 2024: Camera-ready Due
- July 5-7, 2024: Conference Dates

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四、工程期刊论文

写作工具:

• Word

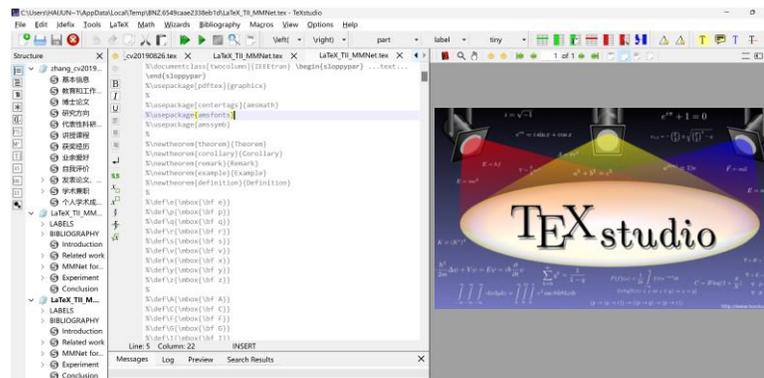
- 无门槛, 容易写draft
- 可以track change

• Latex

- 主流编辑软件
- 有入门门槛
- 熟练掌握命令, 一劳永逸
- 排版漂亮
- 常用工具

✓ WinEdit

✓ Overleaf (多人协作)



Log in to Overleaf

Log in with Google

Log in with ORCID

Log in with IEEE

Log in with Twitter ...

OR

329215889@qq.com

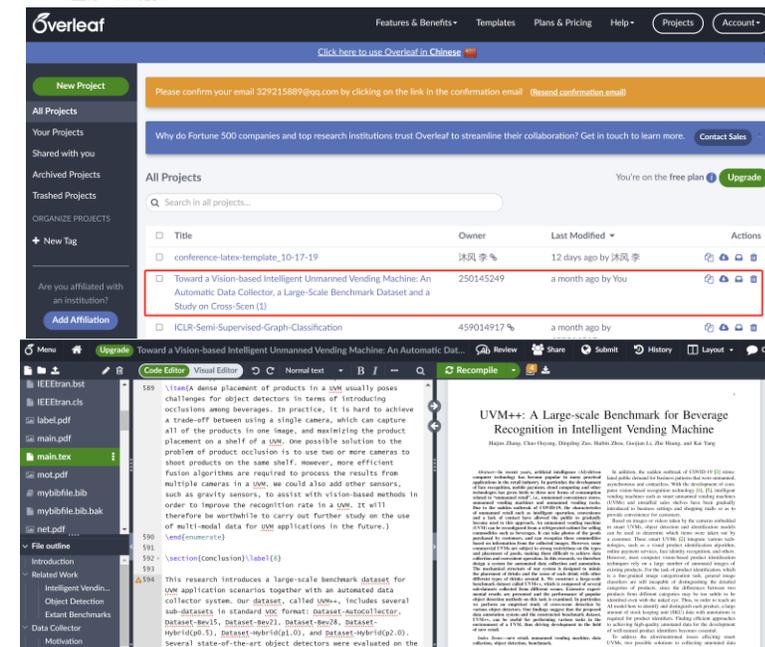
Log in with your email

OR

[tree2vector: Learning a Vectorial Representation for Tree-Structured Data

Haijun Zhang, Shuang Wang, Xiaofei Xu, Tommy W. S. Chow, and Q.M. Jonathan Wu

Abstract: The tree structure is one of the most powerful structures for data organization. An efficient learning framework for transforming tree-structured data into vectorial representations is presented. First, in attempting to uncover the global discriminative information of child nodes hidden at the same level of all the trees, a clustering technique can be adopted for allocating children into different clusters, which are used to formulate the components of a vector. Moreover, a Locality-Sensitive Reconstruction (LSR) method is introduced to model the reconstruction process, where each parent node is assumed to be reconstructed by its children. The resulting reconstruction coefficients are reversely transformed into complementary reconstruction coefficients, which are used for locally weighting the components of the vector. A new vector is formulated by concatenating the original parent node vector and the learned vector from its children. This new vector for each parent node is inputted into the learning process of formulating vectorial representation at the upper level of the tree. This recursive process is ended when a vectorial representation is achieved for the entire tree. Our method is examined in two applications: book author recommendation and content-based image retrieval. Extensive experimental results demonstrate the effectiveness of the proposed method for transforming tree-structured data into vectors.



四、工程期刊论文

一般两类：

- **系统型**

- 以系统流程的形式书写
- 其中有部分算法创新 (key components)

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 22 Issue: 10

Textual and Visual Content-Based Anti-Phishing: A Bayesian Approach

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Gang Liu; Tommy W. S. Chow; Wenyin Liu [All Authors](#)

131 Cites in Papers | 3181 Full Text Views

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Pattern Recognition
Volume 44, Issue 2, February 2011, Pages 471-487

A coarse-to-fine framework to efficiently thwart plagiarism

Haijun Zhang, Tommy W.S. Chow [✉](#)

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<https://doi.org/10.1016/j.patcog.2010.08.023> [Get rights and content](#)

- [Title](#)
- [Abstract](#)
- [Introduction](#)
- [Framework](#)
 - [Overview of Framework](#)
 - [Key modules](#)
 - [Implementation details](#)
 - [Analysis](#)
- [Evaluation](#)
- [Discussion](#)
- [Conclusion](#)
- [Acknowledgement](#)
- [Reference](#)
- [Appendix](#)

四、工程期刊论文

一般两类：

• 算法型

➤ 新的问题，新的模型/算法

✓ 自建数据集，验证算法有效性（也要对比近似算法）

➤ 老的问题，新的模型/算法

✓ Benchmarks（标准数据集）

✓ 对比大量已有算法（尤其是近年Competitive算法）

- [Title](#)
- [Abstract](#)
- [Introduction](#)
- [Related Work](#)
- [Our Method](#)
- [Evaluation](#)
- [Discussion](#)
- [Conclusion](#)
- [Acknowledgement](#)
- [Reference](#)
- [Appendix](#)

Journals & Magazines > IEEE Transactions on Mobile C... > Volume: 11 Issue: 7

Nature-Inspired Self-Organization, Control, and Optimization in Heterogeneous Wireless Networks

Publisher: IEEE Cite This PDF

Stuart Milner; Christopher Davis; Haijun Zhang; Jaime Llorca All Authors

65	1386
Cites in	Full
Papers	Text
	Views

🔍 ⏪ ⏩ 📄 🔔

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 31 Issue: 9

Collocating Clothes With Generative Adversarial Networks Cosupervised by Categories and Attributes: A Multidiscriminator Framework

Publisher: IEEE Cite This PDF

Linlin Liu; Haijun Zhang; Xiaofei Xu; Zhao Zhang; Shuicheng Yan All Authors

43	950
Cites in	Full
Papers	Text
	Views

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Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE Cite This PDF

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu All Authors

58	1523
Cites in	Full
Papers	Text
	Views

🔍 ⏪ ⏩ 📄 🔔

Journals & Magazines > IEEE Transactions on Consumer... > Volume: 68 Issue: 3

Crowd Counting by Using Top-k Relations: A Mixed Ground-Truth CNN Framework

Publisher: IEEE Cite This PDF

Li Dong; Haijun Zhang; Kai Yang; Dongliang Zhou; Jianyang Shi; Jianghong Ma All Authors

6	1075
Cites in	Full
Papers	Text
	Views

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四、工程期刊论文

论文内容一般组织结构:

- Title
- Abstract
- Introduction
- Related Work
- Our Method/Framework
- Experiment
- Discussion
- Conclusion
- Acknowledgement
- Reference
- Appendix



Step by step...

四、工程期刊论文

Title

- **吸引别人眼球的最直接方式**
- **即简洁又具体:**
 - **简洁：不宜过长（一般20个words以内）**
 - **具体：主要技术和思想体现在标题中**
- **Tips:**
 - **尽量不要使用“Research on”, “Study of...”等冗余的词汇**
 - **不要使用重复的词汇、语态等**
 - **不同期刊文章的标题风格不同**
 - ✓ **Nature/Science等和IEEE Trans.有区别**



四、工程期刊论文

Abstract

- 让别人判断是否继续阅读正文的基本信息
- 有清晰的“故事线”：
 - 1句话背景、挑战
 - 1句话别人做了什么/存在什么问题
 - 1句话本文做了什么方法
 - 2-3句解释其中的关键创新点
 - 1-2句实验验证和效果（如果自建数据集可以提）
 - 0-1句研究发现和研究延伸用途

• Tips:

- 尽量不要用公式、尽量不要用引用
- 不要直接copy从Introduction或者正文其他地方的句子。

Journals & Magazines > IEEE Transactions on Cybernet... > Volume: 50 Issue: 10

Bridging User Interest to Item Content for Recommender Systems: An Optimization Model

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Yanfang Sun; Mingbo Zhao; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

37
Cites in
Papers

956
Full
Text
Views



Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58
Cites in
Papers

1523
Full
Text
Views



四、工程期刊论文

Introduction

- 让别人判断本文写作水平的基本部分
- 有丰富的“故事线”：

1段

- 1-2句话背景、场景
- 1-2句话挑战

1-3段

- 别人做了什么和存在的问题
 - ✓ 如果是系统型论文，可以把Related Work相关内容在这里体现

1段

- 本文针对什么现存的问题展开
- 针对问题的难点（和自己提出方法对应）
- 本文方法和具体如何解决上述难点
- 实验验证效果

1段

- 总结贡献点(Contribution Summary)
 - ✓ 建议不用写实验效果，除非有重大发现

1段

- 论文的组织结构

• Tips:

- Background要尽量commonsense（大同行&小同行）
- 贡献**不要用too strong words描述**
 - ✓ Moderate（论文应该是让别人评价的）

Journals & Magazines > IEEE Transactions on Cybernet... > Volume: 50 Issue: 10

Bridging User Interest to Item Content for Recommender Systems: An Optimization Model

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Yanfang Sun; Mingbo Zhao; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

37 Cites in Papers 956 Full Text Views

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58 Cites in Papers 1523 Full Text Views

四、工程期刊论文

Related Work

- 体现前期基础、调研深度和对问题的理解程度
- 分类综述 (review) :
 - 主题 “由远及近”
- 描述方式
 - 1-2句话归纳现存工作 (加多个引用)
 - 单独介绍某个工作具体的做法
 - 优势、局限
- Features of our work (本文特征)
 - 更清晰地、有针对性地强化本文特点
 - 和现有工作的区别和联系

• Tips:

- 注意所列文献必须所有都在正文中有引用
- 注意恰当引用 (该引用的地方就必须引用)

Journals & Magazines > IEEE Transactions on Cybernet... > Volume: 50 Issue: 10

Bridging User Interest to Item Content for Recommender Systems: An Optimization Model

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Yanfang Sun; Mingbo Zhao; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

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Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58 Cites in Papers 1523 Full Text Views



四、工程期刊论文

Our Method/Methodology/Framework

- 体现技术内容和创新的部分
- 一般内容:
 - Motivation (研究动机)
 - Definition/notation (定义/符号释义)
 - Algorithm (算法)
 - Pseudo-code (伪代码)
 - Diagram (流程图)
 - Implementation details (实现细节)
 - Analysis (theoretical, computational)
(必要的理论分析)

• Tips:

- 注意公式要有编号、要在正文中引用
- 注意图、表有编号、要在正文中引用
- 公式符号的一致性和符号的解释定义
- 方法名称缩写的一致性和必要性

Journals & Magazines > IEEE Transactions on Cybernet... > Volume: 50 Issue: 10

Bridging User Interest to Item Content for Recommender Systems: An Optimization Model

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Yanfang Sun; Mingbo Zhao; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

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Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58 Cites in Papers 1523 Full Text Views



四、工程期刊论文

Experiment/Evaluation

- 实验的详尽性、充分性、可复现性
- 一般内容:
 - Datasets (数据集)
 - Evaluation Measures (评测指标)
 - Compared Methods (对比算法)
 - Experimental Setup (实验设置)
 - ✓ 参数设置 (包括对比算法的参数)、实验环境设置
 - Comparative Results (对比结果)
 - ✓ Quantitative (量化对比)
 - 总体对比, 与传统方法对比, 与同类方法对比, 自己不同版本方法对比
 - ✓ Qualitative (定性对比)
 - 可视化对比等
 - Ablation Study/Parametric Study (消融实验)
 - Extensions/Additional Experi. (扩展实验)
 - Discussion (实验结果讨论)

- Tips:
 - 注意实验细节一定要详尽
 - 注意数据要非常准确
 - 注意图、表的解释要非常详尽
 - ✓ 所有图、表都要解释

Journals & Magazines > IEEE Transactions on Cybernet... > Volume: 50 Issue: 10

Bridging User Interest to Item Content for Recommender Systems: An Optimization Model

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Yanfang Sun; Mingbo Zhao; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

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Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58 Cites in Papers 1523 Full Text Views

四、工程期刊论文

Discussion

- 对别人最具有启发性的部分之一
- 实验总结、技术局限性讨论，体现论文的完整性
- 一般内容：
 - 前一部分实验结果的总结
 - 参数的选择（实际应用中）
 - 存在局限性
 - 未来展望

• Tips:

- 这部分主要体现完整性，非必须
- 反思自己方法的局限性，有助于深刻理解问题，但是不要太过否定自己工作
(Tricky)

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Hajjun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58	1523
Cites in	Full
Papers	Text
	Views

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四、工程期刊论文

Conclusion

- 是别人最后关注本文工作的部分
- 一般内容:
 - 总结全文
 - ✓ 1句话概括本文方法
 - ✓ 1-2句话key components
 - ✓ 1-2句话实验结果
 - ✓ 1-2句话future work

补充说明

-全文各个Sections之间的过渡段（个人建议）

• Tips:

- 注意不要简单重复摘要和Introduction的部分内容
- 避免使用公式等

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

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Cites in	Full
Papers	Text
	Views

四、工程期刊论文

Acknowledgement

- **致谢部分**
- 一般内容:
 - 受资助的项目号
 - ✓ 咨询导师
 - 有贡献的相关老师、同学
 - ✓ 这些贡献够不上co-authorship
 - 有贡献的组织机构
 - ✓ 实验室、数据提供方等
 - 匿名审稿人

- Tips:
 - 有的是单独有Acknowledgement部分
 - 有的是直接放在首页左下角 (IEEE Trans)
 - 项目号一定要全和准确

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Hajjun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58	1523
Cites in	Full
Papers	Text
	Views

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四、工程期刊论文

Reference

- 引用文献的水平直接或间接体现您的水平
- 一般内容:
 - 所有在正文中引用的文献
 - ✓ 不要多、也不要少（投稿前check）
 - 尽量少引用thesis的文献
 - 尽量少引用News/Report/URL的文献
 - 尽量少引用Patent文献
 - 尽量少引用arXiv文献
 - 尽量多引用期刊论文

• Tips:

- 注意引用文献的格式统一
 - ✓ 不要漏项（Publication source, date, etc.）
- 有些期刊对引用格式有要求（字母/数字顺序）
- 注意要引用适当（一般至少2-3篇）出自所投期刊的文献
 - ✓ 增加期刊相关性
 - ✓ 对期刊的impact有“好处”

Journals & Magazines > IEEE Transactions on Neural N... > Volume: 29 Issue: 11

Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data

Publisher: IEEE [Cite This](#) [PDF](#)

Haijun Zhang; Shuang Wang; Xiaofei Xu; Tommy W. S. Chow; Q. M. Jonathan Wu [All Authors](#)

58	1523
Cites in	Full
Papers	Text
	Views

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四、工程期刊论文

Appendix

- 受版面限制，一些补充说明内容
- 一般内容:
 - 实验结果
 - ✓ 由于投稿期刊有页数限制，需要把部分实验结果放上（Web上可以下载浏览，但是不纸质版发行）
 - ✓ 不想放正文，但是需要回应审稿人 Reviewers的一些实验结果
 - 算法流程图
 - 理论分析

• Tips:

- 首轮投稿也可以放Appendix，容易打动审稿人



四、工程期刊论文

补充说明-图的重要性

- 学会画图
 - 图中信息要尽量详略得当
 - 色彩搭配
 - 对齐美观
- 做图水平一般决定了写文章的水平
 - Nature/Science, PNAS, IEEE Trans.

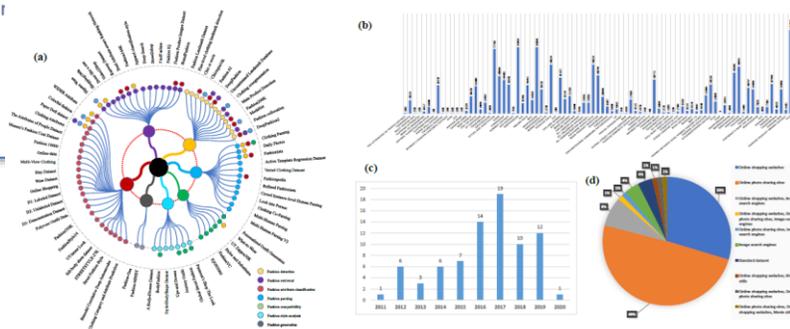
Journals & Magazines > IEEE Transactions on Consumer... > Early Access

Toward Fashion Intelligence in the Big Data Era: State-of-the-Art and Future Prospects

Publisher: IEEE Cite This PDF

Linlin Liu; Haijun Zhang; Dongliang Zhou; Jiar

138 Full Text Views



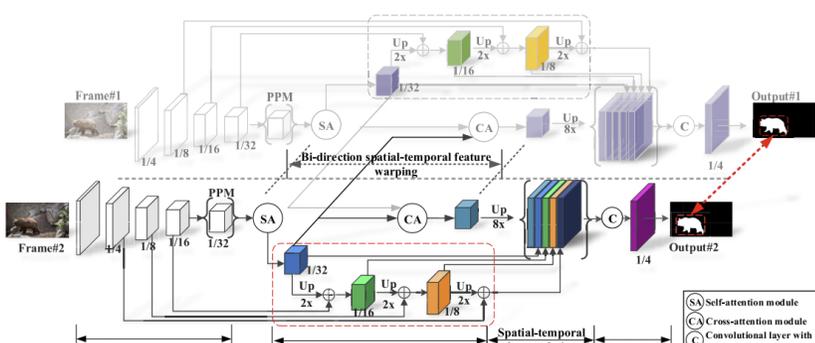
Journals & Magazines > IEEE Transactions on Neural N... > Volume: 32 Issue: 6

CASNet: A Cross-Attention Siamese Network for Video Salient Object Detection

Publisher: IEEE Cite This PDF

Yuzhu Ji; Haijun Zhang; Zequn Jie; Lin Ma; Q. M. Jonathan Wu All Authors

44 Cites in Papers 2358 Full Text Views



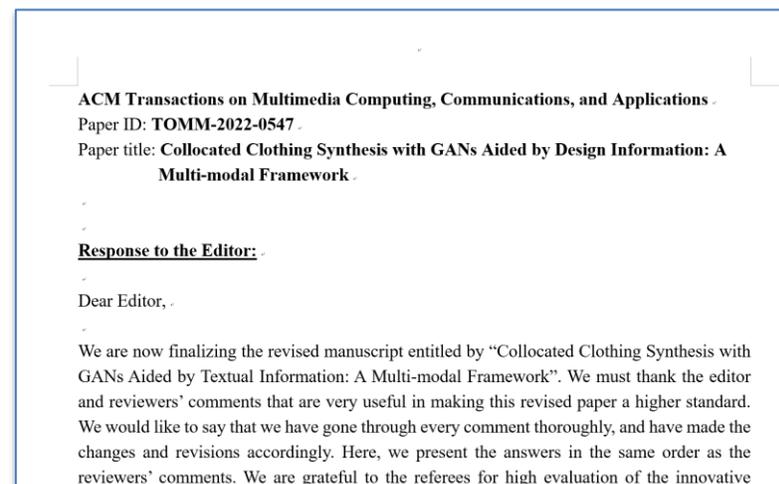
四、工程期刊论文

Response Letter一般组织结构:

- Letter的首页
 - Letter格式作为引子
 - Major revisions
 - ✓ 归纳审稿人主要意见
 - ✓ 修改的主要部分
- Response to AE
 - 重视AE的意见, 重点回复
 - 如果AE没有意见, 也要表示感谢, 说明已按照审稿人意见认真修改
- Response Reviewer #1/ #2/ #3...
 - 先放上其原始comments, 然后再逐条回复
- 致谢Acknowledgement

• Tips:

- **注意Response Letter的排版格式**
- **注意审稿人的每个Word都要认真对待和回复, 正文中用不同颜色代表修改内容**
- **不知如何回复、不懂审稿人的意思 (英文) 时, 需要与所有作者讨论确认**
- **Be polite & Be confident**



一

论文涉众角色

二

论文的做与写

三

发表源的选择

四

工程期刊论文

五

撰写实战训练

五、实战经验训练

我的个人习惯

- **先做实验（所有实验）**
 - 用word记录好所有的实验结果
 - ✓ 表和图
- **写作时间**
 - 先用Word写好Manuscript
 - ✓ 注意所有格式
 - ✓ 文献用word功能中的交叉引用，用蓝色标记
 - ✓ 图、表、公式、Section、算法在正文中的引用用红色/蓝色标记
 - ✓ 所有图和表放在word最后（标题写好）
 - 发给导师反馈
- **投稿时间**
 - 根据期刊模板，1-2天转成latex

tree2vector_rev2.doc

2016/10/5 15:19

Microsoft Word ...

4,046 KB

[Tree2Vector: Learning a Vectorial Representation for Tree-Structured Data]

Haijun Zhang, Shuang Wang, Xiaofei Xu, Tommy W. S. Chow, and Q.M. Jonathan Wu

Abstract: Tree is one of the most powerful structures for data organization. An efficient learning framework for transforming tree-structured data into vectorial representations is presented. First, in attempting to uncover the global discriminative information of child nodes hidden at the same level of all the trees, a clustering technique can be adopted for allocating children into different clusters, which are used to formulate the components of a vector. Moreover, a Locality-Sensitive Reconstruction (LSR) method is introduced to model the reconstruction process, where each parent node is assumed to be reconstructed by its children. The resulting reconstruction coefficients are reversely transformed into complementary reconstruction coefficients, which are used for locally weighting the components of the vector. A new vector is formulated by concatenating the original parent node vector and the learned vector including the information from its children. This new vector for each parent node is inputted into the learning process of formulating vectorial representation at the upper level of the tree. This recursive process is ended until a vectorial representation is achieved for the entire tree. Our method is examined in two applications: book author recommendation and content-based image retrieval. Extensive experimental results demonstrate the effectiveness of the proposed method for transforming tree-structured data into vectors.

Index Terms: Tree structure, vectorial representation, sparse representation, author

五、实战经验训练

练习1

- 下载并阅读如下论文：
 - [1]. H Yan, H Zhang, J Shi, et al., “Inspiration Transfer for Intelligent Design: A Generative Adversarial Network With Fashion Attributes Disentanglement,” *IEEE Transactions on Consumer Electronics*, 69 (4):1152-1163, Nov. 2023.



Journals & Magazines > IEEE Transactions on Consumer... > Volume: 69 Issue: 4

Inspiration Transfer for Intelligent Design: A Generative Adversarial Network With Fashion Attributes Disentanglement

Publisher: IEEE Cite This PDF

Han Yan; Haijun Zhang; Jianyang Shi; Jiangong Ma; Xiaofei Xu All Authors

7 Cites in Papers 331 Full Text Views

©

[1]. <https://ieeexplore.ieee.org/abstract/document/10065574>

[2]. <https://ieeexplore.ieee.org/abstract/document/9693190>

练习2

- 下载并阅读如下论文：
 - [2]. H Yan, H Zhang, et al., “Toward Intelligent Design: An AI-based Fashion Designer Using Generative Adversarial Networks Aided by Sketch and Rendering Generators,” *IEEE Trans. on Multimedia*, 25: 2323-2338, 2022.



Journals & Magazines > IEEE Transactions on Multimedia > Volume: 25

Toward Intelligent Design: An AI-Based Fashion Designer Using Generative Adversarial Networks Aided by Sketch and Rendering Generators

Publisher: IEEE Cite This PDF

Han Yan; Haijun Zhang; Linlin Liu; Dongliang Zhou; Xiaofei Xu; Zhao Zhang; Shuicheng Yan All Authors

9 Cites in Papers 1469 Full Text Views

©

五、实战经验训练

练习2

- 下载并阅读如下论文:

- [2]. H Yan, H Zhang, et al., “Toward Intelligent Design: An AI-based Fashion Designer Using Generative Adversarial Networks Aided by Sketch and Rendering Generators,” *IEEE Trans. on Multimedia*, 25: 2323-2338, 2022.

Journals & Magazines > IEEE Transactions on Multimedia > Volume: 25

Toward Intelligent Design: An AI-Based Fashion Designer Using Generative Adversarial Networks Aided by Sketch and Rendering Generators

Publisher: IEEE [Cite This](#) [PDF](#)

Han Yan; Haijun Zhang; Linlin Liu; Dongliang Zhou; Xiaofei Xu; Zhao Zhang; Shuicheng Yan **All Authors**

9 Cites in Papers **1469** Full Text Views

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[2]. <https://ieeexplore.ieee.org/abstract/document/9693190>

练习2的迭代

名称	修改日期	类型	大小
professor zhang 0531_AI_DESIGN_...	2021/6/22 15:00	Microsoft Word ...	536 KB
0531_AI_DESIGN_abstract_hj.docx	2021/6/20 20:32	Microsoft Word ...	42,616 KB
0531_AI_DESIGN_abstract.docx	2021/5/31 17:19	Microsoft Word ...	42,613 KB
0531_AI_DESIGN_rev222.docx	2021/5/31 12:44	Microsoft Word ...	23,528 KB
0530.docx	2021/5/31 10:24	Microsoft Word ...	42,659 KB
5_19_AI-design_revByHJ.docx	2021/5/30 11:39	Microsoft Word ...	42,611 KB
5_19_AI-design.docx	2021/5/19 13:28	Microsoft Word ...	42,568 KB
0517.docx	2021/5/19 13:28	Microsoft Word ...	42,568 KB
yanhan_0429_v2.docx	2021/5/15 21:40	Microsoft Word ...	40,552 KB
yanhan_0428_3.docx	2021/4/28 22:34	Microsoft Word ...	37,941 KB
yanhan_0428_2.docx	2021/4/28 14:31	Microsoft Word ...	36,486 KB
yanhan_0419_v2.docx	2021/4/27 21:15	Microsoft Word ...	36,311 KB
yanhan_0413_v1_uncomplete.docx	2021/4/16 15:47	Microsoft Word ...	35,091 KB
yanhan_0413_v1.docx	2021/4/13 11:14	Microsoft Word ...	35,051 KB

accomplish the repetitively drawing process. Although these traditional tools can produce astonishing imagery on the hands of experienced designers, they are unable to assist designers to automatically create certain preliminary context-sensitive fashion designs according to users' requirements. Fortunately, recent advances in deep learning techniques are making 'intelligent' design appear to be possible.

Most of current studies in fashion areas primarily work on image synthesis by using deep learning and generative models [3], which have provided powerful tools to fashion image generation [4][5][6][7]. These generation models were explored under both unconditional settings and conditional settings. Many unconditional models based on the latent code have achieved promising results on image generation [4][5]. These models, however, cannot control attributes and textures when generating images. In order to make the generation process more controllable, condition-based models in the fashion learning field were leveraged to learn propagation textures in an established sketch. In particular, most of these works [6][8] disentangled images into multiple classes, such as tops, shoes, etc., or trained models independently for pure color clothes and striped clothes, resulting in compromised quality of generated images when addressing fashion items with complex textures. In addition, these methods usually require much supervised information during training (i.e., sketch, binary image, texture, categories, etc.), leading to difficulties for users who are not experienced. Another limitation of these texture guided models lies in that given an established sketch, they mainly focus on propagation textures, without taking design inspirations or even innovations into account. As a consequence, besides the randomness brought by latent code, these supervised learning models lack the creativity and flexibility substantially.

是不是还是要过一下，设计师设计过程，重要的因素是 sketch, texture 等... 然后说 texture 可能可以从 real photograph 来源... 然后再说 challenge? ? ? ? ? Actually, to learn an artificial intelligence (AI)-driven design model

仅供参考，敬请批评指正！

Q&A



[NCAA 公众号](#)

张海军

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