WANRONG HE 何婉榕

✉ hwr19@mails.tsinghua.edu.cn · 📞 (+86) 13601253053 · ⊙ Azure-Vision · 🔗 Personal Website ·

Room 106B, Unit 2, Building 8, Redbud Apartment, Tsinghua University, Beijing, China. 100084

🎓 EDUCATION

Tsinghua University, *Undergraduate*, *ISSS*   Sep 2019 – present
- Undergraduate student of Institute for Interdisciplinary Information Sciences, supervised by Andrew Yao
- GPA 3.90, Comprehensive Excellence Award (2019-2020 academic year), Comprehensive Excellence Award (2020-2021 academic year)
- **Courses:** Linear Algebra，Calculus，General Physics, Abstract Algebra，Probability and Statistics, Applied Mathematics of AI, Introduction to Databases, Algorithm Design, Machine Learning, Deep Learning, Theory of Computation, Computer Vision, Artificial Intelligence: Principles and Techniques, Natural Language Processing, Data Structure

Tsinghua University High School, *High School*   Sep 2016 – Jul 2019
- Grand Prize and Gold Prize (Computer) in S.-T. Yau High School Science Award, National First Prize of Awarding Program for Future Scientists
- Principal Scholarship, Top 1% of AMC12

👥 ACADEMIC EXPERIENCE & SOFTWARE PROJECTS

Interactive Natural Language Processing, UMIACS of Maryland University   Feb 2022 – Jun 2022
- (J1 visa processing, to be done) Under the guidance of Prof. Jordan Boyd-Graber, design NLP models that are able to learn from interactions with humans.

Interactive Makeup Transfer, Tsinghua Future Lab   Sep 2021 – present
- Design UI for interactive makeup transfer. Users can dynamically refine makeup until satisfied.
- Based on PSGAN, design grid attention mechanism which allows for makeup combination of different facial parts.
- Planing to submit the paper Grid-Attention Autoencoder for Controllable and Precise Makeup Transfer to ECCV 2022.

Spreadsheet Formula Prediction, Microsoft Research Asia   Jul 2021 – present
- Design hierarchical transformer-based decoder for formula sketch generation by multi-level expanding non-terminals in the parse tree.
- Writing the paper "Is sequence-to-sequence enough for code generation? Generating Spreadsheet Formulae by Hierarchical Multi-Granularity Expansion" as the first author and planning to submit it to a top conference.

Cross-lingual evaluation of multi-lingual PLMs, NLP Lab of Tsinghua University   Jun 2020 – Jun 2021
- Data cleaning, data analysis, evaluation method design, parameter tuning, training the neural network.
- As the third author, I participated in writing "Is Cross-lingual Evaluation Only About Cross-lingual?", which is submitted to ACL rolling review.

Study of Geometry Lecturing Tool Based on GeoGebra Plotting, Tsinghua High School   Feb 2017 - Feb 2018
- Designed an interactive geometry lecturing tool that won Grand Prize in S.-T. Yau High School Science Award.
- Implemented the text analysis of the geometry exercise solutions and the synchronized highlighting of geometric figures.

♡ ACTIVITIES

- Vice President of Student Association of Science and Technology; member of Business Intelligence Design Project;
- Organization Secretary of AI Class; volunteer recruiter for Tsinghua University;
- Interviews with 8 Tsinghua University alumni entrepreneurs during winter vacation;
- Led a 5-member team to complete the design of Intelligent Caregiver Management System, and achieved top 3 of the track in Tsinghua Great Idea Challenge
- Founder of "Tsinghua High School Little Banyan Tree Student Charity Fund"

ℹ ENGLISH

TOEFL: 110 (speaking: 24), GRE: 330+4.5, Excellent written and verbal communication skills

⚙ TECH SKILLS

C++, Python, PyTorch, Linux, LaTeX, Shell Script, HTML, JavaScript, React

WANRONG HE 何婉榕

✉ hwr19@mails.tsinghua.edu.cn · ☎ (+86) 13601253053 · ⌂ Azure-Vision · 🔗 个人主页

中国，北京市，双清路 30 号清华大学，紫荆公寓 8 号楼 2 单元 106B 室，100084

🎓 教育背景

清华大学, 本科, 交叉信息研究院 　　　　　　　　　　　　　　　　　　　　2019.09 – 至今
- **人工智能专业**，GPA 3.90，清华大学综合优秀奖（2019-2020 学年），清华大学综合优秀奖（2020-2021 学年）
- **部分课程**：线性代数，微积分，普通物理，抽象代数，概率与统计，人工智能应用数学，数据库系统概论，算法设计，机器学习，深度学习，计算理论，计算机视觉，人工智能: 原理与技术，自然语言处理，数据结构

清华附中, 高中 　　　　　　　　　　　　　　　　　　　　　　　　　　　2016.09 – 2019.07
- 丘成桐中学生计算机金奖和科学金奖，"明天小小科学家"全国一等奖
- 清华附中启迪奖学金校长奖，AMC12 Top1

👥 研究/项目经历

交互式自然语言处理，马里兰大学 UMIACS 　　　　　　（J1 签证办理中，待进行）2022.02 – 2022.06
- 将在 Jordan Boyd-Graber 教授的指导下，设计能够与人类互动并向人类学习的 NLP 模型

交互式妆容迁移，清华大学未来实验室 　　　　　　　　　　　　　　　　　2021.09 – 至今
- 设计交互式妆容迁移的用户界面，允许用户动态地调整妆容
- 在 PSGAN 的基础上，设计网格注意力机制，允许不同脸部部位的妆容拼接
- 撰写论文 "Grid-Attention Autoencoder for Controllable and Precise Makeup Transfer"，计划投稿至 ECCV 2022

表格公式预测，微软亚洲研究院 　　　　　　　　　　　　　　　　　　　　2021.07 – 至今
- 设计基于 Transformer 的多级解码器，通过多层扩展公式解析树中的非端点层次化地生成公式框架
- 正在作为一作撰写论文"Is sequence-to-sequence enough for code generation? Generating Spreadsheet Formulae by Hierarchical Multi-Granularity Expansion"，并计划投稿至顶级会议

胰岛素智能管理，上海期智研究院 　　　　　　　　　　　　　　　　　　　2021.03 – 2021.06
- 对医院原始数据进行数据清洗
- 设计 NODE 网络，智能预测糖尿病患者每日需注射的胰岛素剂量

人像进入绘画，清华大学 　　　　　　　　　　　　　　　　　　　　　　　2021.03 – 2021.06
- 调用百度图像分割 API，实现定位算法
- 基于 ConSinGAN，制作能将人像图片融入背景绘画的在线交互程序

跨语言模型的评测，清华大学 NLP 实验室 　　　　　　　　　　　　　　　　2020.06 – 2021.06
- 进行数据清洗、数据分析、评测方法设计、调参训练神经网络等
- 作为第 3 作者撰写论文 "Is Cross-lingual Evaluation Only About Cross-lingual?"，正在投稿 ACL 滚动评审

基于 GeoGebra 自动作图的几何讲题工具研究，清华附中 　　　　　　　　　　2017.02 – 2018.02
- 设计交互式几何讲题工具，实现题目解答的文本分析和几何图形的实时亮显
- 获得丘成桐中学科学奖金奖（冠军）、计算机金奖

♡ 活动经历

- 计算机系科协副主席，班级生活委员，清华大学招生志愿者
- 智联计划寒假实践采访 8 位清华创业校友，商业智慧设计人才培养项目成员
- 带领 5 人团队完成"智能护工管帮系统"设计，在清华大创意挑战赛中取得赛道前 3 强
- 清华附中"小榕树学生公益活动基金"发起人，清华附中高研实验室学生导师

ⓘ 英语水平

TOEFL：110（口语 24），GRE：330+4.5, 优秀的英语书面和口头交流能力

⚙ IT 技能

C++, Python, PyTorch, Linux, LaTeX, Shell Script, HTML, JavaScript, React