Yunchao “Lance” Liu

CONTACT INFORMATION

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Google Scholar: http://scholar.google.com/citations?user=oFtlWfwAAAAJ&hl=en

EDUCATION

Vanderbilt University

- **Doctor of Philosophy (Ph.D.)** student in Computer Science — Aug 2018 – Present
- Advisors: Dr. Jens Meiler, Dr. Tyler Derr, Dr. Bobby Bodenheimer
- Cumulative GPA: 3.92 / 4.00

University of Texas at Dallas

- **Master of Science (M.S.)** in Computer Science — May 2015
- Cumulative GPA: 3.85 / 4.0

Beijing University of Posts and Telecommunications

- **Bachelor of Science (B.S.)** in Management — Sep 2013

RESEARCH EXPERIENCE

Meiler Lab, Vanderbilt University
PhD Student, Computer Science Department — Sep 2018 – Present

- Advisors: Dr. Jens Meiler, Dr. Tyler Derr, Dr. Bobby Bodenheimer
- Research Areas: Computer-Aided Drug Discovery, Geometric Deep Learning, Self-Supervised Learning

State Key Laboratory of Intelligent Technology and Systems, Tsinghua University
Research Assistant, Department of Computer Science and Technology — Jul 2012 – Mar 2013

- Advisor: Dr. Xiaolin Hu
- Research areas: Visual Saliency for Road Sign Detection

PUBLICATIONS

Yunchao Liu, Rocco Moretti, Bobby Bodenheimer and Jens Meiler. Foldit Drug Design Game Usability Study: Comparison of Citizen and Expert Scientists. 2020. Preceddings of the 13th Annual ACM SIGGRAPH Conference on Motion, Interaction and Games (MIG), 2020

SERVICES

Program Committee Member

- Machine Learning on Graphs (MLoG): 2022 @ ACM International Conference on Web Search and Data Mining (WSDM) — 2022

Conference Reviewer

- Deep Generative Models for Highly Structured Data (DGM4HSD): 2022 @ International Conference on Learning Representations (ICLR) — 2022
- AI for Science (AI4Science): 2021 @ Conference on Neural Information Processing Systems (NeurIPS) — 2021

Conference Sub-Reviewer

- The Web Conference (TheWebConf) — 2022
- International Conference on Learning Representations (ICLR) — 2022
- ACM International Conference on Web Search and Data Mining (WSDM) — 2022
- ACM International Conference on Information and Knowledge Management (CIKM) — 2021
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) — 2021

Conference Volunteer

- Session Manager at ACM International Conference on Web Search and Data Mining (WSDM) 2022

INVITED TALKS

Foldit Drug Design Game Usability Study: Comparison of Citizen and Expert Scientists — Oct 2020
ACM SIGGRAPH Conference on Motion, Interaction and Games (MIG)
Zucker Family Graduate Education Center (virtual due to COVID-19)

OTHER WORK EXPERIENCE

American Wonder Porcelain LLC., Nashville, TN, USA
IT Specialist — Sep 2015 – Jan 2018
- Administrated IFS ERP system: user right control, workflow design and etc.
- Analyzed sales data with Power BI
- Planned internet layout
- Provided other technical support

Xtera Communicatons Inc., Allen, TX, USA
Software Engineer Intern — Jan 2015 – Jul 2015
- Developed visulization software for remotely monitoring optical signals

University of Texas at Dallas, Dallas, TX, USA
Website Developer Intern — Jun 2014 – Dec 2014
- Developed websites for the international center

PROJECTS

Foldit Drug Design (FolditDD) Usability Study — 2020
- Used the think-aloud method to conduct a usability study on FolditDD
- Compared the expert scientists and citizen scientists for their scientific problem solving skill in a game setting

FolditDD Interface Revamp — 2019
- Customized Foldit interface to meet the need for drug design
- Introduced a preset function to quickly set the interface to drug design settings

Geometric Objects Rendering with Ray Tracing Technique — 2019
- Used C++ and OpenGL library to render objects using ray tracing technique
- Achieved optical effects including reflection, diffusion, (overlapping) shadows

Geographical Data Visualization for UFO reports — 2018
- Visualized geographic data of USO reports in the USA
- Designed interactive UI with features including zooming/panning/subplot

Visualizing Protein Flexibility using the Visualization Toolkit (VTK) — 2018
- Developed a C++ program using VTK library to show the distance of two conformations of a protein
- Designed visulization scheme to show color coded flexibility on different parts of the protein

IFS Enterprise Resource Planning (ERP) Deployment — 2016– 2018
- Designed the workflows for purchase order, inventory management, sales order, invoice, shop order, work order in the IFS ERP system
- Extracted data using SQL and designed auto-generated financial reports including balance sheet, income statement, cost analysis etc.

Library Management System — 2015
- Designed and developed a library management system uisng Java and SQL
- Features including book lookup, return, overdue fine calculation, fine payment etc.

Full-time Curricular Practical Training (CPT) calculator — 2014
- Developed a web-based full-time CPT calculator at the international center at UT Dallas to help international students avoid overtime working

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SKILLS

Proficient with: Python, LaTeX
Coded using: C, C++, C#, Java, Visual Basic, HTML, Javascript, MATLAB, R
Operating Systems: CentOS, Ubuntu, and Windows

LANGUAGES

English: Fluent (speaking, reading, writing).
Chinese: Native language.

REFERENCES

Available Upon Request

[*CV compiled on 2022-02-16*]