JANE HSIEH

469-450-7176 ⋄ Email: jhsieh@oberlin.edu
janeon.github.io ⋄ linkedin.com/in/jane-hsieh

EDUCATION

Carnegie Mellon University PhD in Software Engineering (in progress) — August 2020 - Present
Oberlin College Bachelor of Arts in Computer Science and Mathematics — August 2016 - May 2020
With a Concentration in Cognitive Science — (Major) GPA: (3.77) 3.71

RESEARCH & WORK, EXPERIENCES

Modeling & improving career trajectories/earning efficiencies of gig workers *Fall 2020 - ongoing*
Research assistant of the Social AI group, advised by Haiyi Zhu — Pittsburgh, PA
Conducted literature review on practices of gig workers who complete highly specialized tasks
Modeling freelancing practices using inverse reinforcement learning methods & data from major gig platforms

Support Portal at IBM *Summer 2020*
Software Enginner Intern on IBM's Toolbox Team — Raleigh, NC
Conducted user research with administrators to reveal internal productivity painpoints and devise solutions
Developed drivers in Slack and Github to provide self-service features that normally require admin privileges

Constructing Effective Stack Overflow Questions *Fall 2019-Spring 2020*
Honors Project in Computer Science, advised by Cynthia Taylor — Oberlin, OH
Conducted literature review to find factors of successful questions, and verified with a two-proportions Z-test
Developed a dynamic Chrome plugin that provides actionable suggestions to users constructing questions

Interactive Terminal Application for IBM's Multicloud Manager *Summer 2019*
Extreme Blue Technical Intern, managed by Ross Grady — Raleigh, NC
Conducted user research with internal Kubernetes operators to identify relevant painpoints
Developed vi-based tool for multicloud applications using Python's curses library and Agile practices
Created the open-sourced multicloud-incident-response-navigator project and published patent defense

UNAKITE Chrome Extension *Summer 2018-2019*
REUSE Program at Carnegie Mellon University, advised by Brad Myers & Aniket Kittur — Pittsburgh, PA
Conducted user studies at the HCI institute, designed and implemented interface improvements using React
Published and presented findings at the 2018 *VL/HCC* conference
Continued various user studies and analysis through remote collaboration

Characterizing and Separating Magnetic Nanoparticles *2016 - 2018*
STRONG Pre-First-Year Program, advised by Yumi Ijiri — Oberlin, OH
Assisted in making design improvements for a nanoparticle separation channel after testing with a prototype
Used Jupyter Notebook to fit polarization-analyzed small-angle neutron-scattering data from 16 conditions
Analyzed resulting trends to learn about behavior and interactions of the manganese ferrite particles

PUBLICATIONS

1. Michael Xieyang Liu, **Jane Hsieh**, Nathan Hahn, Angelina Zhou, Emily Deng, Shaun Burley, Cynthia Taylor, Aniket Kittur, Brad A. Myers, "Unakite: Scaffolding Developers' Decision Making About Trade-offs through Capturing and Organizing Web Resources", *ACM Symposium on User Interface Software and Technology, UIST'19*, New Orleans, LA, October 20-23, 2019. pp. 67-80. ACM DL and local pdf. **Best Paper Honorable Mention Award** from the ACM Symposium on User Interface Software and Technology, UIST'19 (top 6 out of 93 accepted papers).

2. Michael Xieyang Liu, Nathan Hahn, Angelina Zhou, Shaun Burley, Emily Deng, **Jane Hsieh**, Aniket Kittur and Brad A. Myers, "UNAKITE: Support Developers for Capturing and Persisting Design Rationales When Solving Problems Using Web Resources", *DTSHPS'18 Workshop on Designing Technologies to Support Human Problem Solving* (DTSHPS'18) at VL/HCC'2018. Oct. 1, 2018. p. 25. extended abstract or full proceedings.

3. **Jane Hsieh**, Michael Xieyang Liu, Brad A. Myers, Aniket Kittur, "Poster: An Exploratory Study of Web Foraging to Understand and Support Programming Decisions," *2018 IEEE Symposium on Visual Languages and Human-Centric Computing* (VL/HCC'18), October 1 - 4, 2018, Lisbon, Portugal. pp. 305-306. IEEE DL and local pdf.

4. Yumi Ijiri, Kathryn L. Krycka, Ian Hunt-Isaak, Hillary Pan, **Jane Hsieh**, Julie A. Borchers, James J. Rhyne, Samuel D. Oberdick, Ahmed Abdelgawad, Sarah A. Majetich, "Correlated spin canting in ordered core-shell $Fe_3O_4/Mn_xFe_{3-x}O_4$ nanoparticle polycrystalline assemblies," *Physical Review B* 99(9). March 18, 2019. p. 094421. APS DL and local pdf.

TEACHING, SERVICE & VOLUNTEERING

User Experience Researcher for Educational Equity *Summer 2020 - ongoing*
Conducted market research and interviews to build a program to help women (undergraduates and those going under a career) transition to become more familiar with the world of tech

Web Development for Digital Yearbook *Summer 2020*
Designed and implemented visual layout to the digital yearbook using Omeka Classic, CSS, HTML and PHP

Uncovering Covid Workshop Leader *Spring 2020*
Planned, trained for and led weekly discussions for 15 admitted Oberlin students on a half-module course exploring Covid-19 from a variety of disciplines. Attended weekly lectures by professors from 8 departments.

Sophomore Opportunities & Academic Resources (SOAR) Leader *Fall 2019 - Spring 2020*
Recruit participants and plan for winter retreat to provide students with resources for major declaration

Office hour holder and Tutor for Algorithms *Fall 2018*
Led group workshops to guide students on homework problems twice per week (sessions open to entire class)

Grader for Algorithms, Data Structures *Fall 2017 - Fall 2018*
Assessed and provided feedback to ≈ 20 student worksheets weekly

Computer Science Majors Committee Member *Fall 2018 - Spring 2020*
Organized department activities, updated committee websites, held weekly office hours

Lab helper for Introductory course in Python *Spring 2017, 2018*
Assisted ≈ 20 students debug and find logical errors in weekly Python assignments

Oberlin Workshop & Learning Sessions (OWLS) Leader for Algorithms *Fall 2018*
Attended class to plan and lead interactive, non-traditional workshops (weekly)

ACM ICPC East Central NA Regional Contest *Fall 2017*
Received Honorary Mention

Advanced Chinese Drill Session Teacher *Spring 2017*
Created lesson plans (after attending class) to lead weekly drills to help students improve speaking fluency

Technical languages: Advanced: Python, Javascript (React & Angular), LaTex
Familiar: Git, C^{++}, CSS/HTML, Swift, Java Beginner: Go, GraphQL, TypeScript

Spoken languages: Mandarin, Shanghainese, Spanish

Other interests: Violin, running, rock climbing, baking, reading

OTHER PROJECTS

Automated Lab Helper (AI project) *Spring 2019*
Created program that lints code, sorts errors and recommends solutions for beginning CS students at Oberlin

Frontend Dev for Conceptum: a Question Repository for Educators *Winter - Spring 2019*
Implemented Angular interface components for an iterative question development site designed for professors

Taskat (HCI project) *Fall 2019*
Designed and implemented React Electron desktop app to help users to record, and track time of tasks

Star and Galaxy Clustering (Systems project) *Spring 2018*
Implemented K-means in C^{++}, used SIMBAD catalogue to query $\sim$ 1000 stars and gnuplot as frontend

Food Optimization and Peer Tutoring Messaging apps *Fall 2018 & Winter 2017*
Developed prototype iOS apps using Swift 2 & 3 PennApps & Oberlin

AWARDS & HONORS

2020 R.J. Thomas Award for Outstanding Computer Science Student $500
Awarded per annum to one senior in the Computer Science Department

Clare Boothe Luce Scholarship at Oberlin College $38,808
Awarded per annum to a woman studying in a scientific field

2018 Computing Research Association for Women GHC Research Scholarship $500

John F. Oberlin Scholarship $69,000

Oberlin College Grant $23,538

Oberlin ASG Endowed Scholarship $20,324

STRONG Scholar $2,500
Researched in 2016 and mentored 2017's cohort of students from underrepresented backgrounds

CONFERENCES & WORKSHOPS ATTENDED

Symposium on Visual Language and Human-Centric Computing October 2018
Presented poster and short talk. Submitted extended abstract and workshop paper *Lisbon, Portugal*

Grace Hopper Celebration Fall 2018
Research scholar with the Computing Research Association for Women *Houston, Texas*

Ohio Summer Research Symposium July 2017
Gave talk on modeling PASANS data of Manganese Ferrite Nanoparticles *Ohio Wesleyan University*

Celebration of Undergraduate Research Oberlin, OH
- Poster: An Exploratory Study of Web Foraging to Understand & Support Programming Decisions *2018*
- Poster: Determining the Magnetic Structure of Ferrite Nanoparticles *2017*
- Poster: Improving the Design of a Magnetic Nanoparticle Separation Channel *2016*