JANE HSIEH

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EDUCATION

PhD in Software Enginnering from Carnegie Mellon University August 2020 - Present
Bachelor of Arts from Oberlin College August 2016 - May 2020
Majors in Computer Science and Mathematics, Concentration in Cognitive Science Major GPA: 3.77
Member of *IEEE* and *American Physical Society* Cumulative GPA: 3.71
IB Diploma recipient HS Ranking: 2/22

RESEARCH & WORK EXPERIENCES

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

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 Tradeoffs 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.

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*

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

TEACHING, EXTRACURRICULARS & VOLUNTEERING

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

Workshop Leader for Uncovering Covid Course *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 - current*
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 - current*
Organized department activities, updated committee websites, held weekly office hours

Lab helper for Introductory course in Python *Spring 2017, 2018*
Assisted $\approx$ 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: Python, Javascript (React & Angular), LaTex, Git, Java, C^{++}, CSS/HTML, Swift

Spoken languages: Mandarin, Shanghainese, Spanish

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

OTHER PROJECTS

Automated Lab Helper *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 *Fall 2019*
Designed and implemented React Electron desktop app to help users to record, and track time of tasks

Star and Galaxy Clustering *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