Jenny T. Liang

Software Engineering Researcher
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Education

2021 - 2027   **Carnegie Mellon University**, *Pittsburgh, Pennsylvania*
Ph.D. in Software Engineering

2015 - 2021   **University of Washington**, *Seattle, Washington*
B.S. in computer science & informatics (GPA: 3.77)
UW Academy Scholar *(UW early entrance at 16 years old)*

Research Experience

Jul 2021 -   **Allen Institute of AI (AI2)**, *Mosaic Team*
Present   *Predoctoral Young Investigator*, advised by Ronan Le Bras and Yejin Choi

Project: Multicultural social norm dataset. (lead)
• Investigate methods for collecting annotations on social norms from a culturally diverse set of annotators.

Project: Modeling social norms and morality.
• Build a demo for Delphi, a model which generates inferences on moral situations.
• Investigate the diversity of Commonsense Normbannk, the dataset the Delphi model was trained on.

Apr 2021 -   **Microsoft Research,** *Software Analysis and Intelligence (SAINTES) Group*
Jul 2021   *Research intern,* advised by Danae Ford Robinson and Thomas Zimmermann

Project: Understanding skills for OSS communities. (lead)
• Develop a model of skills in OSS and research how OSS contributors develop and share their OSS skills.

Project: Detecting skills for OSS contributors. (lead)
• Prototype and evaluate a novel technology that automatically detects contributor skills based on GitHub data.

Jan 2020 -   **University of Washington**, *Information School, Code & Cognition Lab*
Present   *Research assistant*, advised by Amy J. Ko

Project: Software design knowledge at the implementation level. (lead)
• Investigate the activities, considerations, and strategies when developers engage in software design at the implementation level.

Project: Explicit programming strategies sharing platform.
• Research how sharing and collaborating on explicit programming strategies impacts developers' problem-solving abilities.

Jun 2020 -   **Allen Institute of AI (AI2)**, *Mosaic Team*
Apr 2021   *Research intern*, co-advised by Swabha Swayamdipta, Chandra Bhagavatula, and Yejin Choi

Project: Interpreting social bias classifiers. (lead)
• Research why social bias classifiers classify certain text as toxic using interpretability methods.

Project: Visual COMeT
• Build a [demo](#) for a model to generate inferences on what agents will do in an image.

Jan 2019 -
Jun 2020

University of Washington, *Computer Science & Engineering, ICTD Lab*
Research assistant, co-advised by Spencer Sevilla and Kurtis Heimerl

Project: Community LTE.
• Research community-maintained LTE networks for rural populations in the developing world.

Publications

* denotes equal contribution

2022	*Understanding Skills for OSS Communities.* **Jenny T. Liang**, Thomas Zimmermann, Denae Ford. In submission.
2022	*Towards Mining OSS Skills from GitHub Activity.* **Jenny T. Liang**, Thomas Zimmermann, Denae Ford Robinson. *IEEE/ACM International Conference on Software Engineering: New Ideas and Emerging Results (ICSE NIER) 2022.* **(26.8% acceptance rate)**
2022	*An Exploratory Study of Sharing Strategic Programming Knowledge.* Maryam Arab, Thomas D. LaToza, **Jenny Liang**, Amy J. Ko. *ACM SIGCHI Conference on Human Factors in Computing Systems (CHI) 2022.* **(12% acceptance rate)**
2021	*Delphi: Towards Machine Ethics and Norms.* Liwei Jiang, Jena D. Hwang, Chandra Bhagavatula, Ronan Le Bras, Maxwell Forbes, Jon Borchardt, **Jenny Liang**, Oren Etzioni, Maarten Sap, Yejin Choi. [arXiv preprint arXiv:2110.07574](#).
2021	*HowToo: A Platform for Sharing, Finding, and Using Programming Strategies.* Maryam Arab, **Jenny Liang***, Yang Kyu Yoo*, Amy Ko, Thomas LaToza. *Visual Languages and Human-Centric Computing (VL/HCC) 2021.* **(29.5% acceptance rate)**
2021	*Whale Watching in Inland Indonesia: Analyzing a Small, Remote, Internet-Based Community Cellular Network.* Matthew Johnson, **Jenny Liang**, Michelle Lin, Sudheesh Singanamalla, Kurtis Heimerl. *The Web Conference (WWW) 2021.*
2019	*Experiences: Design, Implementation, and Deployment of CoLTE, a Community LTE Solution.* Spencer Sevilla, Matthew Johnson, Pathirat Kosakanchit, **Jenny Liang**, Kurtis Heimerl. *ACM Mobicom 2019.* **(18.9% acceptance rate)**
2019	*An All-in-One Community LTE Network.* Spencer Sevilla, Matthew Johnson, Pathirat Kosakanchit, **Jenny Liang**, Kurtis Heimerl. *ACM Mobicom 2019. (Demo)*

Presentations

May 2022	**Towards Mining OSS Skills from GitHub Activity.** *(Invited poster)* International Conference on Software Engineering 2022, Pittsburgh, Pennsylvania, USA.
Sep 2021	**Understanding Skills for OSS Communities** *(Talk)* Microsoft Research.
May 2021	**Interpreting Hate Speech Classifiers: Does dataset label space matter?** *(Talk)* UW Undergraduate Research Symposium.

May 2020	**Explicit Programming Strategies** *(Talk)* UW Undergraduate Research Symposium.
Oct 2019	***CoLTE, An All-in-One Community LTE Network*** *(Demo)* Mobicom 2019, Los Cabos, Mexico.

Honors, Recognitions & Scholarships

2022	***International Conference of Software Engineering Student Mentoring Workshop (ICSE SMeW) Participant*** Participation covers ICSE registration and provides a $1,000 ACM SIGSOFT travel grant.
2021	***National Science Foundation Graduate Research Fellow***
2020	***Computing Research Association Outstanding Undergraduate Researcher Honorable Mention*** Award to recognize undergraduate students in North America who show outstanding research potential in an area of computing research.
2020	***[UW Computer Science & Engineering Undergraduate Service Award](#)*** Award to recognize outstanding graduating seniors who consistently contributed to the department.
2020	***[Husky 100](#)*** Award to recognize 100 UW outstanding students in honor of their contributions to the university.
2019	***[Allen Institute of Artificial Intelligence Outstanding Engineer](#)*** Scholarship awarded to an individual based on software engineering merit.
2019	***UW CSE SIGCSE Scholarship*** Competitive travel grant to the SIGCSE conference on computer science education by the UW computer science department.
2019	***Denice Dee Denton Scholarship*** Departmental scholarship for students who show a commitment to a diverse student population.
2019	***UW CSE Grace Hopper Scholarship*** Competitive travel grant to the Grace Hopper Conference by the UW computer science department.

Industry Experience

Oct 2019 - Dec 2019	***Uber**, Developer Experience	Seattle, WA* *Software engineer intern* Built metrics collection pipeline for Uber's Go Monorepo CI/CD pipeline.
Jun 2019 - Dec 2019	***Apple**, Mail	Cupertino, CA* *Software engineer intern* Built full-stack features for Apple Mail on MacOS and iOS using the Apple development ecosystem.
Mar 2019 - Jun 2019	***Microsoft**, Personal Bing	Bellevue, WA* *Software engineer intern* Independent study on anomaly detection system for time-series data. Built microservice to localize components of a distributed notifications platform, improving queries per second by 100%.
Jun 2018 - Sep 2018	***Microsoft**, Exchange Enterprise Cloud	Redmond, WA* *Software engineer intern* Built console application to intelligently batch mailboxes for mailbox migrations.

Jun 2017 - Sep 2017	**Microsoft**, *Workplace Analytics	Redmond, WA* *Software engineer intern* Built C# to USQL translator for nested queries, joins, aggregate functions, and in-line queries.
Jun 2016 - Aug 2016	**Microsoft**, *Office 365	Redmond, WA* *Intern* Developed a web app to enable registration and applications for an internship program.

Teaching Assistantships

Mar 2020 - Jun 2020	**Building Academic Success through Bottom-Up Computing** *(Intro. to Computer Systems)* Professor: Dan Grossman
Sep 2019 - Mar 2020	**Software Design & Implementation** Professors: Dan Grossman, Hal Perkins
Mar 2018 - Jun 2019	**Accelerated Introduction to Programming, Introduction to Programming II** Professors: Stuart Reges, Hunter Schafer

Volunteer Experience

Sep 2020 - June 2021	**Undergraduate Research Program**, *University of Washington* *Undergraduate Research Leader* Conduct research outreach activities and share research experiences with other undergraduates.
Sep 2018 - Jun 2021	**Student Advisory Council,** *Computer Science & Engineering* *Director of Wellness (2018), Vice Chair (2019), General Member (2020)* Lead a team of students to direct initiatives to support students in the computer science department. *Example projects:* • Direct school-wide initiative to provide computer science students with disabilities with course staff during exams. • Raise $3,000 in a fundraiser for Seattle black-led organization to address healthcare inequities.
Jan 2020 - Jun 2020	**Classy** *Developer Lead* Led a team of developers to build a [web application](#) for a University of Washington class-rating website.
Sep 2018 - Jun 2019	**HuskyTech** *Developer Lead* Led a team of developers to build software tools and systems for HuskyTech operations.
Sep 2017 - May 2019	**TEDxUofW** *Developer Lead* Led two teams of developers to build a conference website and software tools and systems for TEDxUofW operations.