JARED HWANG

Curriculum Vitae: Updated October 2026

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Education

09/2024 - *Present* **University of Washington**, Seattle, WA
Ph.D. Computer Science & Engineering
Advisor: Prof. Jon E. Froehlich

06/2021 - 08/2023 **University of Southern California**, Los Angeles, CA
M.S. Computer Science
GPA: 4.00, M.S. Honors Program

08/2016 - 05/2020 **Tufts University**, Medford, MA
B.S. Physics, B.S. Computer Science
GPA: 3.94, summa cum laude, Sigma Pi Sigma Honor Society

Conference Publications

[C6] **ArtScape: Detecting, Characterizing, and Interactively Exploring Urban Art at Scale Using Vision Language Models** [pdf]
Lucy Jiang*, **Jared Hwang***, Jon E. Froehlich. ** Equal authorship*
⋆ **Best Paper Honorable Mention (Top 1.5%)**
In Proceedings of UIST'26

[C5] **Beyond One Output: Visualizing and Comparing Distributions of Language Model Generations** [pdf]
Emily Reif, Claire Yang, **Jared Hwang**, Deniz Nazar, Noah A. Smith, Jeffrey Heer.
In Proceedings of VIS'26

[C4] **LandmarkLens: Predicting and Presenting Effective Landmarks for Mixed-Reality Urban Exploration** [pdf]
Chu Li, Yotam Sechayk, **Jared Hwang**, Jon E. Froehlich, Takeo Igarashi.
In Proceedings of UIST'26

[C3] **BikeButler: A Personalized, Context-sensitive Bike Routing Tool using Open Data and VLM-based Analyses of Street View Imagery** [pdf]
Jared Hwang, John O'Meara, Zeyu Wang, Jasmine Zhang, Jon E. Froehlich.
In Proceedings of CHI'26

[C2] **"Where can *I* Park?" Understanding Human Perspectives and Scalably Detecting Disability Parking from Aerial Imagery** [pdf]
Jared Hwang, Chu Li, Hanbyul Kang, Maryam Hosseini, Jon E. Froehlich.
In Proceedings of ASSETS'25

[C1] **Digital Typhoon: Long-term Satellite Image Dataset for the Spatio-Temporal Modeling of Tropical Cyclones** [pdf] [Web] [Code]
Asanobu Kitamoto, **Jared Hwang**, Bastien Vuillod, Lucas Gautier, Yingtao Tian, Tarin Clanuwat.
⋆ **Spotlight**
In Proceedings of NeuRIPS'23

Workshops, Posters, Demos, and Extended Abstracts

[D1] **Expanding Access to Urban Art at Scale: A Demo of ArtScape** [pdf]
Lucy Jiang*, **Jared Hwang***, Jon E. Froehlich. * *Equal authorship*
ASSETS'26 Demos

[P1] **ElectroGnome: Limb-Agnostic Synchronous Gestures via Electric-Field Sensing** [pdf]
Cynthia Dong, Andy Ye, **Jared Hwang**, Zachary Englhardt, Jerry Cao, Juyoung Lee, Shwetak N. Patel, Richard Li.
UIST'26 Posters

[W2] **RAMPNET: A Two-Stage Pipeline for Bootstrapping Curb Ramp Detection in Streetscape Images from Open Government Metadata** [pdf]
John S. O'Meara, **Jared Hwang**, Zeyu Wang, Michael Saugstad, Jon E. Froehlich.
ICCV'25 Workshop on Vision Foundation Models and Generative AI for Accessibility

[W1] **"Does the cafe entrance look accessible? Where is the door?" Towards Geospatial AI Agents for Visual Inquiries** [pdf]
Jon E. Froehlich, **Jared Hwang**, Zeyu Wang, John S. O'Meara, Xia Su, William Huang, Yang Zhang, Alex Fiannaca, Philip Nelson, Shaun Kane.
ICCV'25 Workshop on Vision Foundation Models and Generative AI for Accessibility

Research Experience

09/2024 - *Present* **UW Makeability Lab**, University of Washington, Seattle, WA, USA
Advisor: Prof. Jon E. Froehlich

- Created *MultiMap*, an AI-assisted platform for annotating objects across disjoint street- and bird's-eye-views. Performed a user study with 8 GIS experts and 8 non-experts.
- Co-first author of *ArtScape*, a VLM-powered platform for scalably finding, visualizing, and accessibly exploring urban artwork. [C6] [D1]
- Created *BikeButler*, a bike-routing platform that allows users to generate, view, customize, and save bicycle routes based on fine-grained preferences on eight 'bikeability' features. Conducted 16 user-study interviews. [C3]
- Developed and evaluated *AccessParkCV*, a CV pipeline that automatically detects and measures the width of disability parking spaces from aerial imagery. Created and released an 11,762 object dataset, and conducted 11 needfinding interviews [C2]

01/2023 - 08/2023 **NII Kitamoto Lab**, National Institute of Informatics (NII), Tokyo, Japan
Advisor: Prof. Asanobu Kitamoto
Designed and built Pyphoon2, a dataloader for the Digital Typhoon Dataset. Designed

and ran ML benchmark experiments, including classification, regression, and forecasting of typhoon intensity. Work published to NeuRIPS 2023 Datasets and Benchmarks. [C1]

05/2020 - 09/2021 **Tufts Neutrino Group**, Tufts University, Medford, MA, USA
Advisor: Prof. Taritree Wongjirad
Designed and ran ML experiments on neutrino detector image datasets. Created autoencoder based image compression model, producing 80% smaller filesizes compared to JPEG. Prototyped spatial loss algorithm for detector image segmentation.

06/2018 - 03/2020 **MIT Laboratory for Nuclear Science**, MIT, Cambridge, MA, USA
Advisor: Prof. Janet Conrad and Dr. Daniel Winklehner
Developed a particle accelerator simulation code for radio frequency quadrupoles (RFQ) in the IsoDAR experiment. Ran simulations with greater accuracy and 20% faster than competing solutions. Included visualization and parallel computing capability. [Code]

09/2017 - 05/2018 **Tufts Sajina Lab**, Tufts University, Medford, MA
Advisor: Prof. Anna Sajina
Performed statistical analysis and crossmatching of two astronomical satellite datasets.

Projects

11/2021 - 12/2021 **Simulation Inference on Urban Traffic Data**
University of Southern California, Los Angeles, CA
Applied Bayesian conditional density estimation simulation inference to traffic simulations of the Seattle area. [Web]

Industry Experience

10/2023 - 10/2024 **Software Development Engineer**
Amazon, Seattle, WA
Maintained massive pipelines and databases for customer behavior and purchase data.

05/2022 - 08/2022 **Software Development Engineer Internship**
Amazon, Seattle, WA
Integrated Apache Airflow workflow orchestrator for ML pipelines.

Invited Talks

05/2026 **Cascadia Users of Geospatial Open Source (CUGOS) [Web]**
BikeButler: Creating and Previewing Personalized, Context-Sensitive Bicycle Routes [C3]

01/2026 **University of Tokyo**
Host: Prof. Takeo Igarashi
Is there a bike lane? Scalably Understanding and Virtually Interacting with City Streets

10/2025 **Pacific Northwest Transportation Consortium (PacTrans) '25**
BikeButler: Creating and Previewing Personalized, Context-Sensitive Bicycle Routes [C3]

06/2023 **Fujitsu & YNU Typhoon Research Lab Joint Research Workshop**
Machine Learning for the Digital Typhoon Dataset

Featured Press

05/2026 **Seattle Times News Article**
"Better Seattle biking? A UW student and a high schooler have it mapped" [Web] [C3]

04/2026 **UW News Article**
"BikeButler map creates personalized routes for riders based on preferences like speed limits and road conditions" [Web] [C3]

Service

Community

2026 DUB Seminar Student Host (Bryan Wang)
2026 UW HCI Visit Days Scheduler

Paper Reviews

CHI'27, DIS'26, ICCV'25 Workshop on Vision Models and Generative AI for Accessibility

Teaching Assistant

Wi'25, Fa'25 UW CSE160 Data Programming
Fa'22 USC CSCI576 Multimedia Systems Design
Sp'20 Tufts COMP105 Programming Languages
Fa'18, Sp'20 Tufts COMP40: Machine Structure and Assembly Language Programming

Mentoring

2026 Jessia Huang, Undergraduate CSE, UW
2026 Andrew Leffingwell, Master's student CSE, UW
2026 Ryan Aby, Undergraduate CSE, UW
2026 Ben Hu, Undergraduate CSE, UW
2025 Jasmine Zhang, Undergraduate CSE, UW. Now MSCS at Brown University. Co-Authored [C3].
2025 Hanbyul Kang, Undergraduate CSE, UW. Co-Authored [C2].

Honors & Awards

11/2026 UIST 2026 Best Paper Honorable Mention (Top 1.5%)

04/2026 UW CREATE Seed Grant ($40,000)

05/2020 N. Hobbs Knight Prize Scholarship
Tufts University, Medford, MA
For demonstrating outstanding ability in theoretical and experimental physics

Technical Skills

Programming

Python, C++, C, Java, JavaScript, SQL, R

Machine Learning & Development

PyTorch, Tensorflow, PyTorch Lightning, Docker, Slurm, Apptainer

Language

Conversational Japanese, Conversational Mandarin