JIAHUI (KAREN) CHEN

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EDUCATION

UNIVERSITY OF UTAH
B.S. in Computer Science, Minors in Math and Cognitive Science – May 2020
Graduated Cum Laude. Recipient of the President's Scholarship, Regents' Scholarship, and Bingham Alumni Scholarship

RESEARCH EXPERIENCE

BAYESIAN MODELING AT META RESEARCH
July 2022 to Nov 2022
Bayesian modeling and inference, through our own probabilistic programming language.
Implementing Bayesian optional stopping in Meta's A/B tests, to stop experiments early when they are predicted to result in no improvement or regression in metrics, saving revenue and resources.

PROBABILISTIC NEURAL NETWORKS AT META RESEARCH
June 2020 to July 2022
Uncertainty quantification methods (UQM) and metrics for deep learning, specifically in out-of-distribution and adversarial data settings.
Main developer for an uncertainty benchmarking library that allows users to simulate uncertainty, add UQM to models, and run uncertainty-aware experiments on simulated and SOTA benchmark datasets.
Applied UQM to ranking, anti-scraping, and computer vision models in Meta products.

NETWORK TRAFFIC CLASSIFICATION FOR NetSecOps (NSF #1642158)
January 2018 to May 2021
First author on a similarity-based, probabilistic network traffic classification paper.
Advised by Jeff Phillips and Jacobus Van der Merwe.

SLATE: SERVICE LAYERS AT THE EDGE (NSF #1724821)
November 2017 to December 2018
Research assistant and developer for an experimental high performance computing platform that hosts research computing applications on distributed compute resources.

PUBLICATIONS

Hang Wang, Sahar Karami, **Jiahui Chen**, et al. "Training Set Cleansing of Backdoor Poisoning By Self-supervised Representation Learning". IEEE ICASSP 2023

Li Chen, **Karen Chen**, Purvi Goel, Ilknur Kaynar Kabul. "Augment Your Deterministic Model with Monte Carlo Dropout to Combat Noisy Labels". Poster in WiML Workshop 2021

Jiahui Chen, Joe Breen , Jeff M. Phillips, Jacobus Van der Merwe. "Practical and Configurable Network Traffic Classification Using Probabilistic Machine Learning". *Springer Cluster Computing Volume 25 Issue 4*

Joe Breen, Lincoln Bryant, **Jiahui Chen**, et al. "Managing privilege and Access on Federated Edge Platforms". *Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (Learning)*, PEARC'19

Joe Breen, Lincoln Bryant, **Jiahui Chen**, et al. "Developing Edge Services for Federated Infrastructure Using MiniSLATE". *Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (Learning)*, PEARC '19

Joe Breen, Lincoln Bryant, Gabriele Carcassi, **Jiahui Chen**, et al. "Building the SLATE Platform". In *Proceedings of the Practice and Experience on Advanced Research Computing*, PEARC '18

TECHNICAL EXPERIENCE

SOFTWARE ENGINEER – META
Dec 2022 to Present: Generative AI Expressive Media Team
Fine-tuning and prompt engineering work on text to image models (Dalle2, Imagen, Latent diffusion), so they can be used in Meta products.

June 2020 to Nov 2022
Project descriptions in Research Experience section above.

SOFTWARE ENGINEERING INTERN – INSTAGRAM (META)
May 2019 to August 2019
Created computer vision models that detect guideline-violating media. Designed and implemented auto-machine learning thresholding infrastructure that decreased the amount of non-violating media deleted off Instagram. Deployed the models and infrastructure to across Instagram.

INTERN – MICROSOFT AI & RESEARCH ORG
May 2018 to August 2018
Constructed a table parsing system, as part of a webpage parsing pipeline, that used machine learning to find subject properties in tables and rule-based parsing to obtain corresponding subject values. Improved existing table parsing coverage by 2.6 times at 95% accuracy.

LEADERSHIP AND SERVICE

Coding Course TA – Code Tenderloin
June 2020 to Present – Teaching Assistant for free introductory JavaScript courses provided by a non-profit that serves the Tenderloin community of San Francisco.

Section Leader – Code In Place
April to May 2021 – Teaching team member for a 6-week online programming course offered by Stanford University. Over 12,000 students from around the world participated.

Undergraduate Student Advisory Committee – School of Computing, University of Utah
December 2018 to May 2020 - Represented and organized events for students of the Computer Science program at the University of Utah.

Student Ambassador – College of Engineering, University of Utah
November 2016 to May 2020 - Tours, outreach, and presentations leader.

Marine Conservation Alternative Break Trip Leader – Bennion Center, University of Utah
April 2017 to April 2018 – Planned and led an environmental conservation service trip of 10 college students over spring break.

FIRST Lego League Workshops Codirector – Bennion Center, University of Utah
April 2017 to April 2018 - Workshop planner and volunteer coordinator for the FIRST Lego League program of a math and science museum in Salt Lake City.

Women in STEM Mentor – University of Utah
May 2017 to May 2018 - Mentored 10 freshman students, women in STEM group focus.

AmeriCorps Service Term
December 2016 to August 2017 - 300 hour service term for a community health nonprofit.