ELLIE YU-HSI CHENG

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY   2022 - PRESENT
PH.D. IN COMPUTER SCIENCE
Advisor: Michael Carbin
Research Focus: Probabilistic Programming, Neurosymbolic AI

UNIVERSITY OF CALIFORNIA, LOS ANGELES   2018 - 2022
B.S. IN COMPUTER SCIENCE AND ENGINEERING

HONORS AND AWARDS

COMPUTING RESEARCH ASSOCIATION (CRA) OUTSTANDING UNDERGRADUATE RE-   2022
SEARCHER AWARD HONORABLE MENTION

INVITED TALKS

FLIP-HOISTING: A PROBABILISTIC PROGRAM OPTIMIZATION FOR EXACT INFERENCE   2021
THE INTERNATIONAL CONFERENCE ON PROBABILISTIC PROGRAMMING (PROBPROG)

CONFERENCE PUBLICATIONS

INFERENCE PLANS FOR HYBRID PARTICLE FILTERING   2025
ELLIE Y. CHENG, ERIC ATKINSON, GUILLAUME BAUDART, LOUIS MANDEL, MICHAEL CARBIN
PRINCIPLES OF PROGRAMMING LANGUAGES (POPL)
https://arxiv.org/abs/2408.11283

HOW CAN I EXPLAIN THIS TO YOU? AN EMPIRICAL STUDY OF DEEP NEURAL NET-   2020
WORK EXPLANATION METHODS
JEYA VIKRANTH JEYAKUMAR, JOSEPH NOOR, YU-HSI CHENG, LUIS GARCIA, AND MANI SRIVASTAVA
ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS (NEURIPS)

NON-ARCHIVAL PUBLICATIONS

VERIFYING PERFORMANCE PROPERTIES OF PROBABILISTIC INFERENCE   2023
ERIC ATKINSON, **ELLIE Y. CHENG**, GUILLAUME BAUDART, LOUIS MANDEL, MICHAEL CARBIN
THE WORKSHOP ON VERIFICATION OF PROBABILISTIC PROGRAMS (VERIPROP)
https://arxiv.org/abs/2307.07355

FLIP-HOISTING: A PROBABILISTIC PROGRAM OPTIMIZATION FOR EXACT INFERENCE   2021
YU-HSI CHENG, STEVEN HOLTZEN, GUY VAN DEN BROECK, TODD MILLSTEIN
THE INTERNATIONAL CONFERENCE ON PROBABILISTIC PROGRAMMING (PROBPROG)
https://elliecheng.com/publications/ChengPROBPROG21.pdf
Extended draft: https://arxiv.org/abs/2110.10284

EXPERIENCE

BASIS AI   JUN - AUG 2024
RESEARCH INTERN

STRIPE   JUN - SEP 2022
SOFTWARE ENGINEERING INTERN

META PLATFORMS   SEP - DEC 2021
SOFTWARE ENGINEERING INTERN

META PLATFORMS   JUN - SEP 2020
SOFTWARE ENGINEERING INTERN

STATISTICAL AND RELATIONAL ARTIFICIAL INTELLIGENCE LAB, UCLA   JAN 2020 - JUN 2022
UNDERGRADUATE RESEARCH ASSISTANT

NETWORKED & EMBEDDED SYSTEMS LAB, UCLA   OCT 2019 - SEP 2021
UNDERGRADUATE RESEARCH ASSISTANT