

# **Yim Lucky Register**

pronouns: they/them

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#### **University of Washington**

Seattle, WA

Expected Graduation: June 2024

PHD IN INFORMATION SCIENCE NSF GRFP FELLOW

- Advised by: Emma S. Spiro and Jevin West (Center for an Informed Public)
- Research: Al Education; Machine Learning Fairness; Algorithmic Harm Reduction

#### **University of Rochester**

Rochester, NY

May 2016

**BACHELOR OF SCIENCE IN COGNITIVE SCIENCE** WITH HIGH DISTINCTION

• Focus in Artificial Intelligence and Computer Science



**Programming Languages** 

Python, R, HTML/CSS, JavaScript, bash, SQL, MongoDB, Java

Frameworks/Libraries/APIs

scikit-learn, pandas, xgboost, beautiful soup, tensorflow, pytorch-Transformers, pytorch-BERT,

nltk, ggplot, PushShift API, Twitter API, AWS, Amazon ML, OpenAI API

**Favorite ML Topics** 

Principal Component Analysis (dimensionality reduction), Naive Bayes, feature engineering,

information theory, **recommender systems**, gradient descent

**UX Research** 

quantitative and qualitative data collection, statistical modeling and significance testing, NLP analysis

on user comments and reviews, user interviews, usability testing, A/B testing, research design,

prototype engineering and evaluation, survey design, product walkthroughs

**Web Development** 

front end development, JavaScript, mongodb, wireframing, responsive design, user experience,

accessibility testing, debugging, evaluating, Amazon S3 and EC2, docker

Miscellaneous

Explaining ML algorithms to non-experts, data visualization, non-judgmental social advocacy, professional learning materials, management skills, workshops and community outreach



# Projects/Publications \_\_\_\_\_

How Much Do You Care?: Empirical Measures of Data Scientist Interest in AI Ethics

current work

YIM REGISTER, DAN SCHNEIDER, EMMA S. SPIRO

Code.org Societal Impact of Generative AI Collaborative Game (link)

2024

YIM REGISTER, DAN SCHNEIDER, SARAH JUDD, CODE.ORG CURRICULUM TEAM

Code.org Al and Machine Learning

Beyond Initial Removal: Lasting Impacts of Discriminatory Content Moderation to Marginalized Creators on Instagram	2024
YIM REGISTER, IZZI GRASSO, ET AL.	CSCW '24 ACM SIGCHI Conference
Attached to "the Algorithm": Making Sense of Algorithmic Precarity on Instagram (link) YIM REGISTER, LUCY QIN, AMANDA BAUGHAN, EMMA S. SPIRO	2023 CHI '23: ACM CHI Conference
From Complaining to Explaining: Classifying Complaints vs. Explanations of the Instagram Algorithm using NLP Methods and XGBoost	2023
YIM REGISTER, NAYAN KAUSHAL, XIAOBING XU, JOSEPH WILLIAM TAN GARCIA, DEV WILDER, EMMA S. SPIRO	Directed Research Group Project
Al education matters: Guiding our Future Al Leaders with Joy and Justice (link) YIM REGISTER, JOSEPH WILLIAM TAN GARCIA, NAYAN KAUSHAL, DEV WILDER, XIAOBING XU	2022 SIGAI Al Matters Volume 8 Issue 2
Model AI Assignments 2022 (link)	2022
TODD W. Neller, Jazmin Collins, Daniel Schneider, <b>Yim Register</b> et al.	EAAI '22: AAAI Conference
Developing Self-Advocacy Skills for Facebook Users through Machine Learning Education (link)	2022
YIM REGISTERAND EMMA S. SPIRO	ICWSM '22: AAAI Conference
It is Time for a More Critical CS Education (link)	2020
Amy J. Ko, Alannah Oleson, Mara Ryan, <b>Yim Register</b> , et al.	Communications of the ACM, Vol 63.11
Learning Machine Learning with Personal Data Helps Stakeholders Ground Advocacy Arguments in Model Mechanics (link)  YIM REGISTER AND AMY J. KO	2020 ICER '20: ACM Conference
Data Science for Software Engineers  YIM REGISTER AND GREG WILSON	2019 RStudio



**Code.org** 2021, 2023

CONSULTANT

• collaborated with multiple teams (Curriculum, Professional Learning, and Product Team) to offer skills in AI evaluation, ethics, education, and statistics. Developed lessons, professional learning materials, and consulted on evaluation and design of a generative AI product

#### NSF Secure and Trustworthy Cyberspace Program(SaTC) Research and Outreach

202.

RESEARCHER

• Designed and implemented outreach materials regarding misinformation, virality, and overall safety of social media specifically aimed for high-schoolers. Engineered a series of web apps as well as interactive games

#### **Directed Research Group: Natural Language Processing**

2022

PRINCIPAL INVESTIGATOR

• designed and led a directed research group conducting an NLP project about social media algorithmic literacy. collected reddit data to analyse user sentiment and understanding of "the algorithm" on social media

#### **Court Appointed Child Advocate**

020 - 2023

KING COUNTY CASA

· advocate for children in domestic violence, abuse, and neglect cases in the Family Court System in King County, WA

#### EDUCATION TEAM

**RStudio** 

2018

• created a series of lessons to teach Data Science to Software Engineers, using software engineering research examples and R code

#### **Computation and Language Lab**

2015-2018

LAB MANAGER/RESEARCHER

• Church encoding/lambda calculus cognitive models; MCMC Bayesian inference; computational modeling of adults, children, and primates; Linux admin; studied how our brains behave like AI models (or vice versa)

#### Patanadek School, Thailand

2018

ESL KINDERGARTEN TEACHER

• I taught kindergarten before my PhD!



#### **Data Science II: Machine Learning**

2021 - 2024

COURSE CO-TEACHER

University of Washington

• taught ML algorithms like KNN, regression, k-means, PCA, PageRank, Naive Bayes, collaborative filtering, cross validation, random forest

### Calling BS: Data Reasoning in a Digital World (read more)

2023

**HEAD TEACHING ASSISTANT** 

University of Washington

· led weekly sessions about combating misinformation online, as well as spotting how people lie with statistics or incorrect data visualizations

#### **Information Management Introduction to Data Science**

Summer- Autumn 2020

COURSE CURRICULUM CO-DESIGNER

University of Washington

· worked alongside Emma S. Spiro and Construct to create online course materials for the introductory Data Science series

#### Center for an Informed Public Misinfo Day at UW

2020, 2023

INTERACTIVE ACTIVITIES FOR STUDENTS

University of Washington

• Outreach activities for highschoolers to learn about misinformation online

#### **Informatics Design Methods**

2018

TEACHING ASSISTANT

University of Washington

• led students through a quarter-long informatics design project for Community Service

#### **Information Management Web Programming**

2018

TEACHING ASSISTANT

University of Washington

• taught HTML, JavaScript, CSS, and GitHub to Information Management Master's students



#### Center for an Informed Public (CIP) Innovation Grant

2023

GRANT AWARD

#### National Science Foundation (NSF) Graduate Research Fellowship

2019-2022

FELLOWSHIP

#### **CS Hero CSEdWeek Award**

2023

AWARD

2018

SCHOLARSHIP

**Top Scholar Award** 

#### National Organization for Women Susan B. Anthony Award for Activism

2017

Award



#### The Future of AI Can Be Kind

#### Mental Health, Social Media, and Empowerment: Navigating Client Experiences with **Information Online**

mornation on the	
CERTIFIED SPEAKER PROBONO COUNSELING WORKSHOP (TRAINING THERAPISTS ON SOCIAL MEDIA AND MISINFORMATION)	2023
CSEdWeek CS Hero Panel	
SPEAKING ON EXPERIENCES OF TRAUMA-INFORMED DATA SCIENCE EDUCATION AND CS EDUCATIONAL FOR ALL	2023
Boys and Girls Club Learn and Earn Program	
Speaking with highschoolers about a future career in A.I., fielding questions about my research and	2021
ENCOURAGING COMPASSIONATE DATA SCIENCE	2021
Mechanism Design 4 Social Good Working Group MD4SG	
DISCUSSING SELF-ADVOCACY RESEARCH AS WELL AS FUTURE WORK ON FACEBOOK SELF-ADVOCACY FOR DATA SCIENCE NOVICES,	2020
AND HOW WE CAN EMPOWER USERS OF SOCIAL MEDIA TO RESIST ALGORITHMS	2020
Toronto Data Workshop	
DISCUSSING SELF-ADVOCACY RESEARCH AS WELL AS FUTURE WORK ON FACEBOOK SELF-ADVOCACY FOR DATA SCIENCE NOVICES,	
AND HOW WE CAN EMPOWER USERS OF SOCIAL MEDIA TO RESIST ALGORITHMS	2020
LGBTQ Pride Speaker for Qualtrics	
COVERING TOPICS OF ALGORITHMIC BIAS FOR QUALTRICS ENGINEERS, INCLUDING "RAINBOW WASHING" AND OTHER WAYS THAT	
MACHINE LEARNING PERPETUATES HARM ON SOCIAL MEDIA	2020



## **Mission Statement**

RSTUDIO::CONFERENCE Lightning Talks

Data Science for Software Engineers: busting software myths with R

I believe that everyone has a special story to tell, and these stories can help us to implement more compassionate and empowering technology. I work at the intersections of machine learning, trauma-informed computing, and computer science education. I believe in putting AI ethics into practice with a series of comprehensible, practical, and actionable steps. I also believe that anyone can be inspired to care about the AI Ethics landscape, through drawing on their personal experiences and building empathy for others. Together, we all represent different points of intervention in promoting more ethical AI, and it is my mission to empower you to discover what you care about most.

2020