# PETER CARRAGHER

## PhD STUDENT @CMU & EX-META ML ENGINEER

### INDUSTRY EXPERIENCE

**META**
**Machine Learning Engineer:** 2020–21
I designed & deployed detection systems, significantly reducing the prevalence of impersonation and identity fraud on Facebook and Instagram.

**Software Engineer:** 2018–19
I built response systems to prevent coordinated inauthentic attacks on the Indian & EU elections in 2019. I designed & deployed ML models to automate reports of abuse, saving $10 million/year.

**Intern,** Summer 2017, 2018
I added a SVG renderer to the augmented reality graphics engine and built automated the publication of the scripting APIs documentation.

**CODEPLAY, Part-time,** 2015–16
I created a cross platform GPU profiling tool. This work has since been open sourced, published in IWOCL and featured by Kronos & LPGPU2 research groups.

### REFEREES

**Dr. Kathleen Carley,** PhD supervisor
Carnegie Mellon University
kathleen.carley@cs.cmu.edu

**Dr. Patrick Park,** PhD supervisor
Carnegie Mellon University
patpark@cmu.edu

**Dr. Ilaria Gori,** Manager
Facebook
ila@fb.com

2nd year Societal Computing PhD student at CMU with a MSc in Computer Science and over 4 years industry experience.

## PUBLICATIONS

**Misinformation Resilient Search Rankings with Webgraph-based Interventions** pdf . code . data . slides
Peter Carragher, Evan M. Williams, Kathleen M. Carley
*Submitted to TIST: ACM Transactions on Intelligent Systems and Technology. Special Issue on Responsible Recommender Systems*. 2024.

**Detection and Discovery of Misinformation Sources using Attributed Webgraphs** pdf . code . data . slides
Peter Carragher, Evan M. Williams, Kathleen M. Carley
*Upcoming at ICWSM 2024: The 18th International AAAI Conference on Web and Social Media*. 2024.

**Simulation of Stance Perturbation** pdf . abstract . slides
Peter Carragher, Lynnette Xian Ng, Kathleen M. Carley
Full paper: *SBP-BRiMS 2023: International Conference on Social Computing, Behavioral-Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation*. 2023.
Abstract: *WSC 2022: Proceedings of the 2022 Winter Simulation Conference*. 2022.

## EDUCATION

### CARNEGIE MELLON UNIVERSITY
PhD in Computer Science 2022 – current **3.7 GPA**
Studied networks, multimodal ML, and probabilistic models. Actively researching computational social science, network science, information retrieval, ranking systems, fraud detection, and behavioral modelling.

### GEORGIA INSTITUTE OF TECHNOLOGY
MSc in Computer Science 2021 – 22 **3.7 GPA**
Studied machine learning, reinforcement learning, knowledge-based AI, AI ethics, and network science. With the Design & Intelligence lab, I contributed to a virtual teaching assistant that enables learning at scale in online classes.

### UNIVERSITY OF EDINBURGH
BSc in Computer Science 2014 – 18 **4.0 GPA**
Studied a broad range of fields; machine learning, AI, robotics, networking, compilers, system architectures, quantum computing. My thesis extended compilers for heterogenous architectures to map DNN & CNN primitives to FPGA fabric. During this time I was heavily involved in MLH hackathons, including mentoring and judging roles, organizing and running hackathons, and winning three first-place awards.