

Fiona Anting Tan

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Introduction

- Third-year Ph.D. student at the Institute of Data Science, National University of Singapore, and a recipient of the ISEP-IDS Scholarship
- I am passionate about applying my machine learning and deep learning skills to real-world problems.
- My research interests span across natural language processing and causality, with a focus on extracting causal relationships from text to enrich existing knowledge bases and anticipate outcomes.
- I am a firm-believer in empowering women in tech. I mentored at TechLadies and actively participate in communities like WomenWhoCode.

Education

- 2020 – Present **Ph.D. Student** | Institute of Data Science, National University of Singapore, SG
(Expected 12/2024)
- CAP Score: 4.88/5.0
 - Advisor: Ng See-Kiong
 - Relevant modules: Applied Econometrics II, Neural Networks and Deep Learning II, Pattern Recognition, Multivariate Data Analysis
- 2014 – 2017 **B.Sc. in Econometrics and Mathematical Economics** | London School of Economics and Political Science, UK
- First Class Honors with Econometrics dissertation titled 'Does competition affect workers' subjective wellbeing?'
 - Advisor: Guy Michaels

Academic Activities

- 2021 – Present **Organizer** | Challenges and Applications of Automated Extraction of Socio-political Events from Text
- Proposed and organized the Event-Causality Shared Task for the 5th Workshop @ EMNLP (2022) and 6th Workshop @ RANLP (2023)
- 2021 **Teaching Assistant** | BT5126 Hands-on with Business Analytics (Post-grad level)
- 2016 **Part-time Research Assistant** | Harvard Economics Department, US
- Data collection for a macro-finance economic history research project
 - Advisor: Chenzi Xu

Academic Honors and Awards

- 2021 1st place in FinCausal Shared Task on cause-and-effect span detection in financial news [Prize money of USD \$650]
- 2021 1st and 2nd place in CASE Shared Task on multilingual event coreference resolution in socio-political news
- 2020 Finalist (Top 7 out of 60 submissions) in AWS x WomenWhoCode Machine Learning Hackathon to battle COVID-19
- 2020 – 2024 Integrative Sciences and Engineering Programme (ISEP) and Institute of Data Science (IDS) Scholarship [Full Ph.D. scholarship with annual stipend of SGD \$43,200]
- 2015 Singapore-Industry Mid-term Overseas Scholarship [Partial undergraduate scholarship with lump sum stipend of SGD \$60,000]

Academic Publications

Fiona Anting Tan, Debdeep Paul, Sahim Yamaura, Miura Koji, and See-Kiong Ng. 2023. Constructing and Interpreting Causal Knowledge Graphs from News. In *Proceedings of the AAAI Summer Symposium on AI for FinTech, 2023*. Singapore, Singapore.

Fiona Anting Tan, Xinyu Zuo, and See-Kiong Ng. 2023. UniCausal: Unified benchmark and model for causal text mining. In *Big Data Analytics and Knowledge Discovery, DaWaK 2023, Lecture Notes in Computer Science*. Penang, Malaysia. Springer.

Kaustubh Dhole, Varun Gangal, Sebastian Gehrmann, Aadesh Gupta, ..., **Fiona Anting Tan**, ... (many authors). 2023. NL-Augmenter: A Framework for Task-Sensitive Natural Language Augmentation. In *Northern European Journal of Language Technology, Volume 9*, Copenhagen, Denmark. Northern European Association of Language Technology.

Fiona Anting Tan, Hansi Hettiarachchi, Ali Hürriyetoğlu, Tommaso Caselli, Onur Uca, Farhana Ferdousi Liza, and Nelleke Oostdijk. 2022. Event Causality Identification with Causal News Corpus - Shared Task 3, CASE 2022. In *Proceedings of the 5th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE)*, pages 195–208, Abu Dhabi, United Arab Emirates (Hybrid). Association for Computational Linguistics.

Fiona Anting Tan, Ali Hürriyetoğlu, Tommaso Caselli, Nelleke Oostdijk, Tadashi Nomoto, Hansi Hettiarachchi, Iqra Ameer, Onur Uca, Farhana Ferdousi Liza, and Tiancheng Hu. 2022. The Causal News Corpus: Annotating Causal Relations in Event Sentences from News. In *Proceedings of the Thirteenth Language Resources and Evaluation Conference*, pages 2298–2310, Marseille, France. European Language Resources Association.

Fiona Anting Tan, Devamanyu Hazarika, See-Kiong Ng, Soujanya Poria, and Roger Zimmermann. 2021b. Causal Augmentation for Causal Sentence Classification. In *Proceedings of the First Workshop on Causal Inference and NLP*, pages 1–20, Punta Cana, Dominican Republic. Association for Computational Linguistics.

Fiona Anting Tan and See-Kiong Ng. 2021. NUS-IDS at FinCausal 2021: Dependency Tree in Graph Neural Network for Better Cause-Effect Span Detection. In *Proceedings of the 3rd Financial Narrative Processing Workshop*, pages 37–43, Lancaster, United Kingdom. Association for Computational Linguistics.

Fiona Anting Tan, Sujatha Das Gollapalli, and See-Kiong Ng. 2021a. NUS-IDS at CASE 2021 Task 1: Improving Multilingual Event Sentence Coreference Identification with Linguistic Information. In *Proceedings of the 4th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE 2021)*, pages 105–112, Online. Association for Computational Linguistics.

Professional Experience

- 2023 – Present **Quantitative Research Early Mentorship Program** | J.P. Morgan, APAC
 - One-to-one mentorship from J.P. Morgan Quantitative Researchers, interact with senior leaders and receive continuous guidance for career development
- 2022 – Present **Research Attachment** | Panasonic Industrial Devices Technology Centre, SG
 - Constructing knowledge graph from electronics and supply chain news
- 2022 – Present **Research Attachment** | Changi Airport Group, SG
 - Automating customer feedback categorization and topic modelling
- 2022 – Present **Reviewer**
 - Conferences: COLING 2022, IJCAI 2023,
 - Journals: JBCB 2023, IPM 2023

- 2021 – 2022 **Consultant** | Factorem, SG
- Factorem is a tech start-up revolutionizing the manufacturing space in Southeast Asia using AI-driven pricing and supplier-partner matching systems.
 - Built object recognition and computer vision solutions based on 3D designs and images for projects including product similarity scoring, product price forecasting, and supplier to product matching
 - Served as an advisor for interns working on data science projects
- 2020 **Mentor** | TechLadies
- 12-week program to provide women with personal career guidance from experienced industry practitioners as they grow their career in technology
- 2018 – 2020 **Data Science Analyst** | Charles & Keith Group Data Science Department, SG/CN
- Designed a product demand forecasting pipeline using ML on product features
 - Automated stock movement processes onto dot net framework, saving over 1040 man-hours; revised and optimized business logic formulas to reduce stock out and over stock situations
 - Created analytical tools and reports on various topics, such as: Underlying sales factors, reseller impact, omnichannel cannibalization, global product preference
 - Upskilled colleagues with Python know-how: Initiated and held a 3-month 'Introduction to Python Workshop' for over 20 staff; Guided participants on their own project to transform their own work processes into code
 - Overseas secondment to Shanghai: Unifying the processes and operating model between China and HQ on systems including stock monitoring, forecasting and replenishment systems
- 2017 – 2018 **Management Associate** | Charles & Keith Group Inventory Department, SG
- Rotated across International, Singapore and E-commerce Inventory Departments; Managed Inventory for major, new, and sunset markets (Singapore, Malaysia, Malta, Libya, and Panama)
 - Provided automation logic for B2B portals, BI, Qlikview and QlikSense reports
 - Recruited, trained, and assessed new employees in the department

Other Skills and Interests

- Coding languages: Python (Advanced), R (Advanced), SQL (Intermediate), Hive (Intermediate), Stata (Intermediate), Microsoft Excel and VBA (Intermediate)
- Workshops attended: INSEAD Analytics & Machine Learning for Superior Business Performance, Google Machine Learning Bootcamp
- Societies and Leadership Roles: Volunteering at THK Home for Disabled @ Eunus (2008 – Present), Vice President of Special Events for LSESU Economics Society (2015 – 2016)
- Hobbies: Netball