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# Gromit Yeuk-Yin CHAN

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## RESEARCH INTEREST

Visualization, Data Management, Human Computer Interaction

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## EDUCATION

- 2016 - 2021      **New York University**  
Ph.D in Computer Science  
Advisors: *Cláudio T. Silva, Juliana Freire*  
Committee: *Enrico Bertini, Luis Gustavo Nonato, Arvind Satyanarayan*
- 2012 - 2016      **The Hong Kong University of Science and Technology**  
BEng in Computer Engineering and BBA in General Business Management  
Advisor: *Huamin Qu*
- 2005 - 2012      **Queen's College, Hong Kong**  
Hong Kong Advanced Level Examination: *Distinction in Physics*
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## PROFESSIONAL EXPERIENCE

- 2019 - Now      Research Scientist 2, **Adobe Research**, San Jose, CA  
• Previous titles: Research Scientist (2021-23), Research Intern (2019, 2020)
- 2019 Feb - Apr      Visiting Scholar, **diNo Research Group (Paris Descartes University)**, Paris, France
- 2017 Jun- Sep      Research Intern, **Bosch Research**, Palo Alto, CA
- 2016 Aug - 2021 July      Research Assistant, **NYU VIDA (Visualization, Imaging, and Data Analytics Center)**, Brooklyn, NY
- 2015 Jun - 2016 Aug      Undergraduate Researcher, **HKUST VisLab**, Hong Kong
- 2015 Jan - May      IT Consulting Intern, **IBM Global Business Services**, Hong Kong
- 2014 Jun - Aug      Software Engineering Intern, **Orient Overseas Container Line (OOCL)**, Hong Kong
- 2013 Sep - Dec      Design Consulting Intern, **Harman Kardon**, Hong Kong
- 2013 Jun - July      Logistics Intern, **GE Healthcare**, Beijing, China
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## PUBLICATIONS (★ indicates premier venues) (Ⓢ indicates students I directly supervised)

### Conferences and Journals:

- Parikshit Solunke, Vitoria Guardieiro, João Rulff, Peter Xenopoulos, [Gromit Yeuk-Yin Chan](#), Brian Barr, Luis Gustavo Nonato, and Claudio Silva. MOUNTAINEER: Topology-Driven Visual Analytics for Comparing Local Explanations. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2024 ★
- Tongyu Zhou Ⓢ, Jeff Huang, and [Gromit Yeuk-Yin Chan](#).  
Epigraphics: Message-Driven Infographics Authoring.  
*ACM Conference on Human Factors in Computing Systems (CHI)*, 2024 ★ (Best Paper Honorable Mention)

3. Guande Wu, Shunan Guo, Jane Hoffswell, [Gromit Yeuk-Yin Chan](#), Ryan Rossi, and Eunyee Koh.  
Data Story Generation via Adaptive Machine-Guided Elicitation of User Feedback.  
*IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2024 (Proceedings of VIS 2023) ★
4. Pat Sukprasert , [Gromit Yeuk-Yin Chan](#), Ryan Rossi, Fan Du, and Eunyee Koh.  
Discovery and Matching Numerical Attributes in Data Lakes.  
*IEEE International Conference on Big Data (BigData)*, 2023
5. Chen Chen, Jane Hoffswell, Shunan Guo, Ryan Rossi, [Gromit Yeuk-Yin Chan](#), Fan Du, Eunyee Koh, and Zhicheng Liu.  
WhatsNext: Guidance-enriched Exploratory Data Analysis with Interactive, Low-Code Notebooks.  
*IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*, 2023
6. Chieh-Yang Huang, Ting-Yao Hsu, Ryan Rossi, Ani Nenkova, Sungchul Kim, [Gromit Yeuk-Yin Chan](#), Eunyee Koh, C Lee Giles, and Ting-Hao Huang.  
Summaries as Captions: Generating Figure Captions for Scientific Documents with Automated Text Summarization.  
*International Natural Language Generation Conference (INLG)*, 2023 (**Best Paper**)
7. Jun Yuan, [Gromit Yeuk-Yin Chan](#), Brian Barr, Kyle Overton, Kim Rees, Luis Gustavo Nonato, Enrico Bertini, and Claudio T Silva. SUBPLEX: A Visual Analytics Approach to Understand Local Model Explanations At the Subpopulation Level.  
*IEEE Computer Graphics and Applications (CG&A)*, 2022
8. [Gromit Yeuk-Yin Chan](#), Tung Mai, Anup B Rao, Ryan A Rossi, Fan Du, Cláudio T Silva, and Juliana Freire.  
Interactive Audience Expansion On Large Scale Online Visitor Data.  
*International Conference on Knowledge Discovery and Data Mining (KDD)*, 2021 ★
9. [Gromit Yeuk-Yin Chan](#), Fan Du, Ryan A Rossi, Anup B Rao, Eunyee Koh, Cláudio T Silva, and Juliana Freire.  
Real-Time Clustering for Large Sparse Online Visitor Data.  
*The Web Conference (WWW)*, 2020 (Accepted for **Oral Presentation**) ★
10. [Gromit Yeuk-Yin Chan](#), Luis Gustavo Nonato, Alice Chu, Preeti Raghavan, Viswanath Aluru, and Cláudio T Silva.  
Motion Browser: Visualizing and Understanding Complex Upper Limb Movement Under Obstetrical Brachial Plexus Injuries.  
*IEEE transactions on visualization and computer graphics (TVCG)*, 2020 (Proceedings of VIS 2019) ★
11. [Gromit Yeuk-Yin Chan](#), Panpan Xu, Zeng Dai, and Liu Ren.  
ViBR: Visualizing Bipartite Relations at Scale with the Minimum Description Length Principle.  
*IEEE transactions on visualization and computer graphics (TVCG)*, 2019 (Proceedings of VIS 2018) ★
12. Quan Li, Peng Xu, [Yeuk-Yin Chan](#), Yun Wang, Zhipeng Wang, Huamin Qu, and Xiaojuan Ma.  
A Visual Analytics Approach for Understanding Reasons behind Snowballing and Comeback in MOBA Games.  
*IEEE transactions on visualization and computer graphics (TVCG)*, 2017 (Proceedings of VIS 2016) ★
13. [Yeuk-Yin Chan](#) and Huamin Qu.  
FinaVistory: Using Narrative Visualization to Explain Social and Economic Relationships in Financial News.  
*International Conference on Big Data and Smart Computing (BigComp)*, 2016

#### Workshops, Demos and Posters:

1. Alex Tang, [Gromit Yeuk-Yin Chan](#), Ryan Rossi, Chang Xiao, and Eunyee Koh.  
Tabular Data to Image Generation: Benchmark Data, Approaches, and Evaluation [Vision Paper].  
*IEEE International Conference on Big Data (BigData)*, 2023
2. [Gromit Yeuk-Yin Chan](#), Shunan Guo, Caroline Kim, Cole Connelly, Michelle Lee, Andrew Thomson, and Eunyee Koh.  
Detecting Email Components with Constraints: Expressive and Extensible Models in Answer Set Programming.  
*ACM Conference on Human Factors in Computing Systems (Late Breaking Work) (CHI LBW)*, 2023 ★

3. Shubham Agarwal, [Gromit Yeuk-Yin Chan](#), Shaddy Garg, Tong Yu, and Subrata Mitra.  
Fast Natural Language Based Data Exploration with Samples.  
*ACM International Conference on Management of Data (SIGMOD)*, 2023 ★
4. Ryan Aponte, Ryan Rossi, Shunan Guo, Jane Hoffswell, Nedim Lipka, Chang Xiao, [Gromit Yeuk-Yin Chan](#), Eunye Koh, and Nesreen Ahmed.  
A ML-based Approach for HTML-based Style Recommendation.  
*Companion Proceedings of the ACM Web Conference*, 2023 ★
5. Peter Xenopoulos, [Gromit Chan](#), Harish Doraiswamy, Luis Gustavo Nonato, Brian Barr, and Claudio Silva.  
GALE: Globally Assessing Local Explanations.  
*ICML Workshop on Topology, Algebra, and Geometry in Machine Learning*, 2022 (**Spotlight**) ★
6. [Yeuk-Yin Chan](#), Fernando Chirigati, Harish Doraiswamy, Cláudio T Silva, and Juliana Freire.  
Querying and Exploring Polygamous Relationships in Urban Spatio-Temporal Data Sets.  
*ACM International Conference on Management of Data (SIGMOD)*, 2017 (**Best Demo Honorable Mention**) ★
7. Rong Zheng and [Yeuk-Yin Chan](#).  
You Like What You Hear: Using Movie Content to Improve Movie Recommender Systems.  
*Winter Conference on Business Intelligence*, 2016
8. Abishek Puri, Dongyu Liu, Shaoyu Chen, Siwei Fu, Tianyu Wang, [Yeuk-Yin Chan](#), and Huamin Qu.  
ParkVis: A visual analytic system for anomaly detection in DinoFun World.  
*IEEE VIS Workshop on VAST Challenge*, 2015

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## TECH TRANSFERS

1. [AI Assistant](#) (Text-to-SQL modeling). Adobe Experience Platform 2024.
2. [Intelligent Captions in Mobile Scorecards](#). Adobe Analytics 2024.
3. [HTML Email Converter](#). Adobe Journey Optimizer 2023.
4. [Intelligent Captions for CDP Insights](#). Adobe Experience Platform 2022.

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## PATENTS

1. Digital Content Generation From A Text-based Input. Filed 2024.
2. Generation Of Data Story Recommendations Via Elicited User Feedback. Filed 2024.
3. Generating Hierarchical Queries From Natural Language. Filed 2023.
4. Performing Machine Learning Techniques For Hypertext Markup Language-based Style Recommendations. Filed 2023.
5. Hypergraph Representation Learning. File 2023.
6. Generating Data Insights. Filed 2023.
7. Approximate Query Processing for Join Queries. Filed 2023.
8. Generating Editable Email Components Utilizing a Constraint-Based Knowledge Representation. Filed 2022.
9. Systems And Methods For Document Generation. US Patent App. 17/809,371.
10. Extensible Framework for Generating Accessible Captions For Data Visualizations. US Patent App. 17/656,254.
11. Trait Expansion Techniques in Binary Matrix Datasets. US Patent 11,899,693.
12. Segmenting users with sparse data utilizing hash partitions. US Patent App. 17/660,328.
13. Methods and Systems for Simplified Graphical Depictions of Bipartite Graphs. US Patent 10,650,559, 2020.

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## TEACHING

2020 Spring	CS-GY 9223 Visualization for Machine Learning (15 students)
2020 Spring	CS-GY 9223 Visualization: Connections with Machine Learning (23 students)
2018 Fall	CS-GY 6313 Information Visualization (46 students)
2016 Fall	CS-UY 1134 Data Structures and Algorithms (51 students)

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## MENTORING (only includes students I directly supervise)

2024	Donghoon Shin (UW) - Generative Agent for HCI Systems
2023	Tongyu Zhou (Brown) - Text Based Infographics Authoring; Zhihua Jin (HKUST) - Low Code Vis Programming
2022	Huayi Wang (Gatech) - ML Query Acceleration
2021	Pat Sukprasert (Northwestern) - Dataset Discovery

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## PROFESSIONAL SERVICES

### Program Committee:

- WWW (2022, 2023), WSDM (2022-24), CIKM (2022)

### Reviewer:

- ACM CHI (since 2021), IEEE VIS (since 2019), WWW (2020,2024), EuroVis (since 2017), PacificVis (since 2020), IEEE CG&A, IEEE TVCG

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## PRESENTATION, NEWS AND MEDIA COVERAGE

2024	<i>Project Infograph It (a.k.a. Epigraphics)</i> <a href="#">Adobe Summit Sneaks</a> (Press Coverage: <a href="#">Fast Company</a> , <a href="#">ZDNET</a> )
2022	<i>Project Style Blast</i> <a href="#">Adobe Summit Sneaks</a> (Press Coverage: <a href="#">PC Watch</a> , <a href="#">GSPANN</a> )
2021	<i>Interactive Audience Expansion On Large Scale Online Visitor Data</i> KDD, Singapore
2021	<i>Data Summaries for Scalable Visual Analysis</i> Dataminr, New York; Megagon Labs, Mountain View; Adobe Research, San Jose
2020	<i>Real-Time Clustering for Large Sparse Online Visitor Data</i> The Web Conference, Taipei
2019	<i>Visualizing and Understanding Complex Upper Limb Movement Under Obstetrical Brachial Plexus Injuries</i> <a href="#">IEEE VIS, Vancouver</a>
2018	<i>Visualizing Bipartite Relations at Scale with the Minimum Description Length Principle</i> <a href="#">AT&amp;T Graduate Student Symposium, New York City</a> ; <a href="#">IEEE VIS, Berlin</a>
2016	<a href="#">Student Hackers Team Up with Manhattan DA to Fight Human Trafficking</a>
2016	<a href="#">科網雲圖：財經新聞大數據 (in Chinese)</a>
2016	<a href="#">科大生研大數據獲邀海外演講 (in Chinese)</a>

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## AWARDS/HONORS/CERTIFICATIONS

2024	CHI Best Paper Honorable Mention
2023	INLG Best Paper
2018	VIS Student Volunteer
2017	SIGMOD Best Demo Honorable Mention
2017	SIGMOD Student Travel Grant
2016	NYU School of Engineering Fellowship
2016	Bronze Prize of ASM Technology Award
2016	Mr Armin and Mrs Lillian Kitchell Undergraduate Research Award
2016	Technology and Management Elite Student Scholarship
2015	Honorable Mention, IEEE VAST (Visual Analytics Science and Technology) Challenge 2015
2013	HKSAR Government Scholarship Fund - Reaching Out Award
2012	University Entrance Scholarship, HKUST
2012	Morrison Distinction Price, Queen's College