

# Yingtao Tian

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EXPERIENCE	<b>Google DeepMind (formerly Google Brain) Research Scientist</b> Research on generative models and more	Summer 2019 - Now
	<b>Google Brain Software Engineering Intern</b> Research on the latent space of generative models with Dr. Jesse Engel	Summer 2018
	<b>Facebook Software Engineering Intern</b> Research on natural language understanding with Dr. Haixun Wang	Summer 2017
	<b>Google Brain Software Engineering Intern</b> Research on representation learning with Dr. Stephan Gouws	Summer - Fall 2016
	<b>Google Software Engineering Intern</b> User-generated activity profiling and analysis with Dr. Xiaomeng Ban	Summer 2015
	<b>Microsoft Research Asia Research Intern</b> Learning representation from large knowledge base with Dr. Haixun Wang Concept level semantic analysis with Dr. Zhongyuan Wang	2013
EDUCATION	<b>State University of New York at Stony Brook, New York, U.S.</b> Ph.D, Computer Science. Advisor: Prof. Steven Skiena	2014 - 2019
	<b>Fudan University, Shanghai, China.</b> B.Sc., Computer Science and Technology	2010 - 2014
PUBLICATIONS / WORKING PAPERS	<b>DiffCJK: Conditional Diffusion Model for High-Quality and Wide-coverage CJK Character Generation</b> <i>Yingtao Tian</i> <i>International Conference on Computational Creativity (ICCC) 2024</i>	
	<b>Evolution Transformer: In-Context Evolutionary Optimization</b> Robert Tjarko Lange, <i>Yingtao Tian</i> , Yujin Tang <i>The Genetic and Evolutionary Computation Conference (GECCO) 2024</i>	
	<b>Large Language Models As Evolution Strategies</b> Robert Tjarko Lange, <i>Yingtao Tian</i> , Yujin Tang <i>The Genetic and Evolutionary Computation Conference (GECCO) 2024</i>	
	<b>MingOfficial: A Ming Official Career Dataset and a Historical Context-Aware Representation Learning Framework</b> You-Jun Chen, Hsin-Yi Hsieh, Yu Tung Lin, <i>Yingtao Tian</i> , Bert Chan, Yu-Sin Liu, Yi-Hsuan Lin, Richard Tzong-Han Tsai <i>The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)</i>	
	<b>NeuroEvoBench: Benchmarking Neuroevolution for Large-Scale Machine Learning Applications</b> Robert Tjarko Lange, Yujin Tang, <i>Yingtao Tian</i> <i>Thirty-seventh Conference on Neural Information Processing (NeurIPS 2023) Systems Datasets and Benchmarks Track</i>	
	<b>Digital Typhoon: Long-term Satellite Image Dataset for the Spatio-Temporal Modeling of Tropical Cyclones</b> Asanobu Kitamoto, Jared Hwang, Bastien Vuillod, Lucas Gautier, <i>Yingtao Tian</i> , Tarin Clanuwat	

*Thirty-seventh Conference on Neural Information Processing (NeurIPS 2023) Systems Datasets and Benchmarks Track*

**Evolving Collective AI: Simulation of Ants Communicating via Chemicals** Ryosuke Takata, Yujin Tang, *Yingtao Tian*, Norihiro Maruyama, Hiroki Kojima, Takashi Ikegami  
*The 2023 Conference on Artificial Life*

**Evolving Three Dimension (3D) Abstract Art: Fitting Concepts by Language** *Yingtao Tian*  
*Working paper*

**DEIR: Efficient and Robust Exploration through Discriminative-Model-Based Episodic Intrinsic Rewards** Shanchuan Wan, Yujin Tang, *Yingtao Tian*, Tomoyuki Kaneko  
*In the Proceedings of the 32nd International Joint Conference on Artificial Intelligence, IJCAI-23*

**Simultaneous Multiple-Prompt Guided Generation Using Differentiable Optimal Transport** *Yingtao Tian*, David Ha, Marco Cuturi  
*In the Proceedings of the twelfth International Conference on Computational Creativity, ICCO'22*

**EvoJAX: Hardware-Accelerated Neuroevolution** Yujin Tang, *Yingtao Tian*, David Ha  
*In the Proceedings of the Genetic and Evolutionary Computation Conference (GECCO) 2022*

**Optimal Transport Tools (OTT): A JAX Toolbox for all things Wasserstein** Marco Cuturi, Laetitia Meng-Papaxanthos, *Yingtao Tian*, Charlotte Bunne, Geoff Davis, Olivier Teboul  
*Working Paper*

**Modern Evolution Strategies for Creativity: Fitting Concrete Images and Abstract Concepts** *Yingtao Tian*, David Ha  
*In the Proceedings of the The 11th International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART) 2022.*  
*Machine Learning for Creativity and Design Workshop, NeurIPS 2021*

**Ukiyo-e Analysis and Creativity with Attribute and Geometry Annotation** *Yingtao Tian*, Tarin Clanuwat, Chikahiko Suzuki, Asanobu Kitamoto  
*In the Proceedings of the Eleventh International Conference on Computational Creativity, ICCO'21*

**KaoKore: A Pre-modern Japanese Art Facial Expression Dataset** *Yingtao Tian*, Chikahiko Suzuki, Tarin Clanuwat, Mikel Bober-Irizar, Alex Lamb, Asanobu Kitamoto  
*In the Proceedings of the Eleventh International Conference on Computational Creativity, ICCO'20*

**A Transfer-Learnable Natural Language Interface for Databases** Wenlu Wang, *Yingtao Tian*, Haixun Wang, Wei-Shinn Ku  
*In the Proceedings of the IEEE International Conference on Data Engineering (ICDE) 2020*

**Learning to Represent Bilingual Dictionaries** Muhao Chen\*, *Yingtao Tian*\*, Haochen Chen, Kai-Wei Chang, Steven Skiena, Carlo Zaniolo (\* Equal Contribution)  
*In the Proceedings of the IEEE International Conference on Data Engineering (ICDE) 2020*

**Enhanced Network Embeddings via Exploiting Edge Attributes** Haochen Chen, Xiaofei Sun, *Yingtao Tian*, Muhao Chen, Bryan Perozzi and Steven Skiena  
*In Proceedings of the International Conference on Information and Knowledge Management (CIKM) 2018*

**Social Relation Inference via Label Propagation** *Yingtao Tian*, Haochen Chen, Bryan Perozzi, Muhao Chen, Xiaofei Sun and Steven Skiena  
*In the proceeding of the 41st European Conference on Information Retrieval (ECIR 2019)*

**DeepAnnotator: Genome Annotation with Deep Learning**, Mohammad Ruhul Amin, Alisa Yurovsky, *Yingtao Tian*, Steven Skiena

*In Proceedings of the 9th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM BCB-2018)*

**Simple Neologism Based Domain Independent Models to Predict Year of Authorship** Vivek Kulkarni, *Yingtao Tian*, Parth Dandiwal, Steven Skiena

*In Proceedings of the 27th International Conference on Computational Linguistics (COLING 2018)*

**Co-training Embeddings of Knowledge Graphs and Entity Descriptions for Cross-lingual Entity Alignment** Muhao Chen, *Yingtao Tian*, Kai-Wei Chang, Steven Skiena, Carlo Zaniolo

*In Proceedings of the 27th International Joint Conference on Artificial Intelligence (IJCAI), IJCAI/AAAI Press 2018.*

**Syntax-Directed Variational Autoencoder for Structured Data** Hanjun Dai\*, *Yingtao Tian*\* , Bo Dai , Steven Skiena, Le Song (\* Equal Contribution)

*In Proceedings of the International Conference on Learning Representations (ICLR), 2018.*

*Best Paper Award, NIPS 2017 workshop for Machine Learning for Molecules and Materials.*

**Embedding-based Relation Prediction for Ontology Population** Muhao Chen, *Yingtao Tian*, Xuelu Chen, Zijun Xue, Carlo Zaniolo

*In Proceedings of the 17th SIAM International Conference on Data Mining (SDM), SIAM 2018.*

**Towards End-End Generation of High-Resolution Images with Generative Adversarial Networks** [Online Demo] Yanghua Jin, Jiakai Zhang, Minjun Li, *Yingtao Tian*, Huachun Zhu

*Accepted and presented in spotlight, NIPS 2017 workshop for Machine Learning for Creativity and Design.*

**Multilingual Knowledge Graph Embeddings for Cross-lingual Knowledge Alignment** Muhao Chen, *Yingtao Tian*, Mohan Yang, Carlo Zaniolo.

*In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI), IJCAI/AAAI Press 2017.*

PROFESSIONAL SERVICES **Organizer**, *NeurIPS 2022, 2023 Workshop on Machine Learning for Creativity and Design*

**Meta-Reviewer**, *AAAI*

**Reviewer**, *ICLR, NeurIPS, AAAI, IJCAI, LREC, COLING*

PATENTS **US20210398336A1** Method for generating image, image generator, and program

**US10810493B1** Training and/or utilizing recurrent neural network model to determine subsequent source(s) for electronic resource interaction

**WO2022066156A1** Node embedding via hash-based projection of transformed personalized pagerank

HONORS AND AWARDS **27th place**, 35th Annual World Final of the ACM-ICPC , 2011

**Gold Medal**, ACM-ICPC Asia Chengdu Regional Contest, 2011

**Championship and Gold medal**, ACM-ICPC Asia Amritapri Regional Contest, 2010