附 录

实验室研讨会

2020.3.13　腾讯会议	
郝新丽 (Cloud Group)	报告题目：BRITS: Bidirectional Recurrent Imputation for Time Series 报告摘要： Time series are widely used as signals in many classification/regression tasks. It is ubiquitous that time series contains many missing values. Given multiple correlated time series data, how to fill in missing values and to predict their class labels? Existing imputation methods often impose strong assumptions of the underlying data generating process, such as linear dynamics in the state space. In this paper, we propose BRITS, a novel method based on recurrent neural networks for missing value imputation in time series data. Our proposed method directly learns the missing values in a bidirectional recurrent dynamical system, without any specific assumption. The imputed values are treated as variables of RNN graph and can be effectively updated during the backpropagation.BRITS has three advantages: (a) it can handle multiple correlated missing values in time series; (b) it generalizes to time series with nonlinear dynamics underlying; (c) it provides a data-driven imputation procedure and applies to general settings with missing data.
2020.7.3　腾讯会议	
郝新丽 (Cloud Group)	报告题目：Robust and Rapid Clustering of KPIs for Large-Scale Anomaly Detection 报告摘要：For large Internet companies, it is very important to monitor a large number of KPIs (Key Performance Indicators) and detect anomalies to ensure the service quality and reliability. However, large-scale anomaly detection on millions of KPIs is very challenging due to the large overhead of model selection, parameter tuning, model training, or labeling. In this paper we argue that KPI clustering can help: we can cluster millions of KPIs into a small number of clusters and then select and train model on a per-cluster basis. However, KPI clustering faces new challenges that are not present in classic time series clustering: KPIs are typically much longer than other time series, and noises, anomalies, phase shifts and amplitude differences often change the shape of KPIs and mislead the clustering algorithm.
2020.10.13　FL1, Wing Building for Science Complex	
但唐朋 (Cloud Group)	报告题目：Spatial Temporal Trajectory Similarity Join 报告摘要：Existing works only focus on spatial dimension without the consideration of combining spatial and temporal dimensions together when processing trajectory similarity join queries, to address this problem, this paper proposes a novel two-level grid index which takes both spatial and temporal information into account when processing spatial-temporal trajectory similarity

	join. A new similarity function MOGS is developed to measure the similarity in an efficient manner when our candidate trajectories have high coverage rate CR. Extensive experiments are conducted to verify the efficiency of our solution.
2020.10.20 FL1, Wing Building for Science Complex	
但唐朋 (Cloud Group)	报告题目：Searching Activity Trajectories by Exemplar 报告摘要：The rapid explosion of urban cities has modernized the residents' lives and generated a large amount of data (e.g., human mobility data, traffic data, and geographical data), especially the activity trajectory data that contains spatial and temporal as well as activity information. With these data, urban computing enables to provide better services such as location-based applications for smart cities. Recently, a novel exemplar query paradigm becomes popular that considers a user query as an example of the data of interest, which plays an important role in dealing with the information deluge. In this article, we propose a novel query, called searching activity trajectory by exemplar, where, given an exemplar trajectory τq, the goal is to find the top-k trajectories with the smallest distances to τq. We first introduce an inverted-index-based algorithm (ILA) using threshold ranking strategy. To further improve the efficiency, we propose a gridtree threshold approach (GTA) to quickly locate candidates and prune unnecessary trajectories. In addition, we extend GTA to support parallel processing. Finally, extensive experiments verify the high efficiency and scalability of the proposed algorithms.
2020.11.3 FL1, Wing Building for Science Complex	
彭迎涛 (Web Group)	报告题目：RippleNet: Propagating User Preferences on the Knowledge Graph for Recommender Systems 报告摘要：To address the sparsity and cold start problem of collaborative filtering, researchers usually make use of side information, such as social networks or item attributes, to improve recommendation performance. This paper considers the knowledge graph as the source of side information. To address the limitations of existing embeddingbased and path-based methods for knowledge-graph-aware recommendation, we propose RippleNet, an end-to-end framework that naturally incorporates the knowledge graph into recommender systems. Similar to actual ripples propagating on the water, RippleNet stimulates the propagation of user preferences over the set of knowledge entities by automatically and iteratively extending a user's potential interests along links in the knowledge graph. The multiple "ripples" activated by a user's historically clicked items are thus superposed to form the preference distribution of the user with respect to a candidate item, which could be used for predicting the final clicking probability. Through extensive experiments on real-world datasets, we demonstrate that RippleNet achieves substantial gains in a variety of scenarios, including movie, book and news recommendation, over several state-of-the-art baselines.
2020.11.10 FL1, Wing Building for Science Complex	

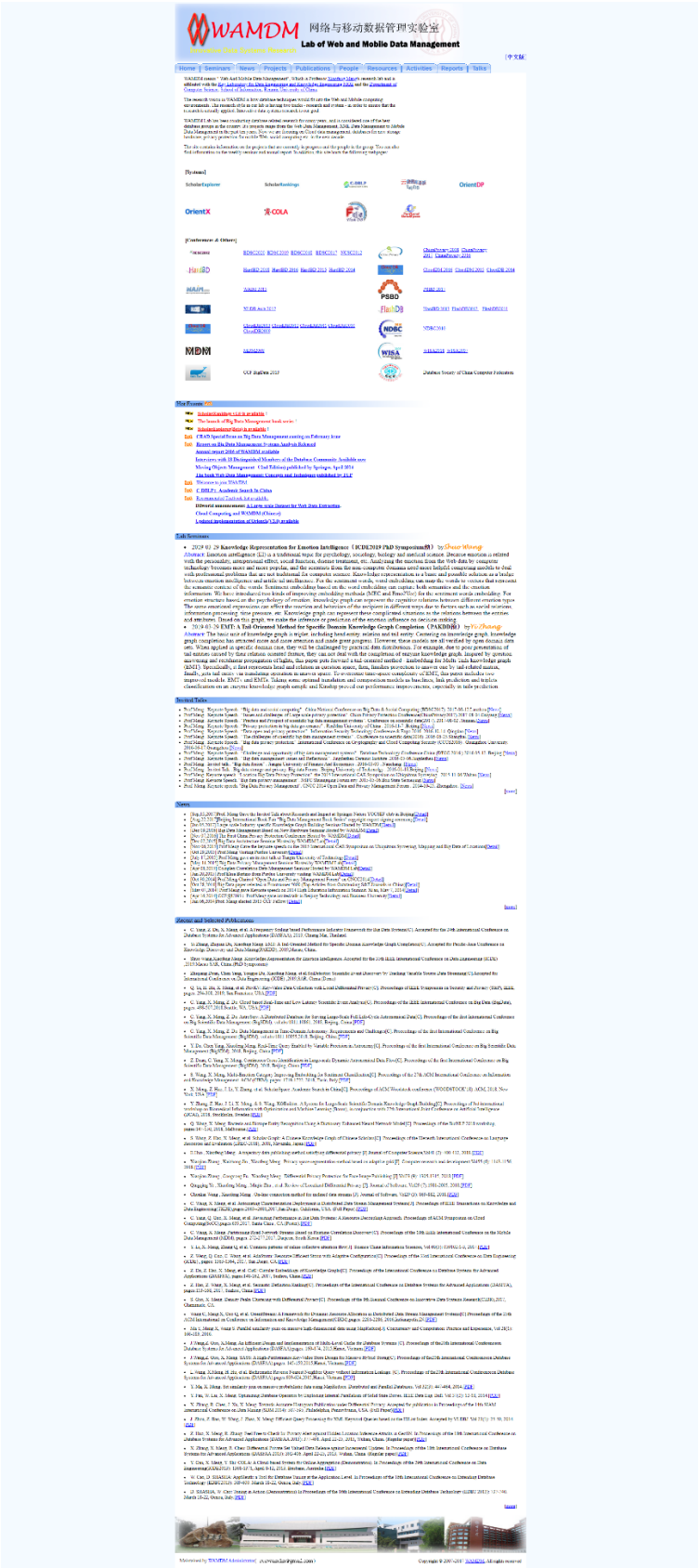
郝新丽 (Cloud Group)	报告题目：Opprentice: Towards Practical and Automatic Anomaly Detection Through Machine Learning 报告摘要：Closely monitoring service performance and detecting anomalies are critical for Internet-based services. However, even though dozens of anomaly detectors have been proposed over the years, deploying them to a given service remains a great challenge, requiring manually and iteratively tuning detector parameters and thresholds. This paper tackles this challenge through a novel approach based on supervised machine learning. With our proposed system, Opprentice (Operators' apprentice), operators' only manual work is to periodically label the anomalies in the performance data with a convenient tool. Multiple existing detectors are applied to the performance data in parallel to extract anomaly features. Then the features and the labels are used to train a random forest classifier to automatically select the appropriate detector-parameter combinations and the thresholds. For three different service KPIs in a top global search engine, Opprentice can automatically satisfy or approximate a reasonable accuracy preference (recall $\geq$ 0.66 and precision $\geq$ 0.66). More importantly, Opprentice allows operators to label data in only tens of minutes, while operators traditionally have to spend more than ten days selecting and tuning detectors, which may still turn out not to work in the end.
马超红 (Cloud Group)	报告题目：Learning Multi-dimensional Indexes 报告摘要：Scanning and filtering over multi-dimensional tables are key operations in modern analytical database engines. To optimize the performance of these operations, databases often create clustered indexes over a single dimension or multidimensional indexes such as R-Trees, or use complex sort orders (e.g., Z-ordering). However, these schemes are often hard to tune and their performance is inconsistent across different datasets and queries. This paper introduce Flood, a multi-dimensional in-memory read-optimized index that automatically adapts itself to a particular dataset and workload by jointly optimizing the index structure and data storage layout. Flood a new multi-dimensional primary index that is jointly optimized using both the underlying data and query workloads.
但唐朋 (Cloud Group)	报告题目：Neural circuit policies enabling auditable autonomy 报告摘要：A central goal of artificial intelligence in high-stakes decision-making applications is to design a single algorithm that simultaneously expresses generalizability by learning coherent representations of their world and interpretable explanations of its dynamics. Here, we combine brain-inspired neural computation principles and scalable deep learning architectures to design compact neural controllers for task-specific compartments of a full-stack autonomous vehicle control system. We discover that a single algorithm with 19 control neurons, connecting 32 encapsulated input features to outputs by 253 synapses, learns to map high-dimensional inputs into steering commands. This system shows superior generalizability, interpretability and robustness compared with orders-of-magnitude larger black-box learning systems. The obtained neural agents enable high-fidelity autonomy for task-specific parts of a complex autonomous system.

2020.11.17 FL1, Wing Building for Science Complex	
郝新丽 (Cloud Group)	报告题目：Active Model Selection for Positive Unlabeled Time Series Classification 报告摘要：Positive unlabeled time series classification (PUTSC) refers to classifying time series with a set P L of positive labeled examples and a set U of unlabeled ones. Model selection for PUTSC is a largely untouched topic. In this paper, we look into PUTSC model selection, which as far as we know is the first systematic study in this topic. Focusing on the widely adopted self-training one-nearest-neighbor (ST-1NN) paradigm, we propose a model selection framework based on active learning (AL). We present the novel concepts of self-training label propagation, pseudo label calibration principles and ultimately influence to fully exploit the mechanism of ST-1NN. Based on them, we develop an effective model performance evaluation strategy and three AL sampling strategies. Experiments on over 120 datasets and a case study in arrhythmia detection show that our methods can yield top performance in interactive environments, and can achieve near optimal results by querying very limited numbers of labels from the AL oracle.
马超红 (Cloud Group)	报告题目：DBOS: A Database-oriented operating system 报告摘要：Current operating systems are complex systems that were designed before today's computing environments. This makes it difficult for them to meet the scalability, heterogeneity, availability, and security challenges in current cloud and parallel computing environments. To address these problems, this paper propose a radically new OS design based on data-centric architecture: all operating system state should be represented uniformly as database tables, and operations on this state should be made via queries from otherwise stateless tasks. This design makes it easy to scale and evolve the OS without whole-system refactoring, inspect and debug system state, upgrade components without downtime, manage decisions using machine learning, and implement sophisticated security features. Everything is table, every request is query.
2020.11.24 FL1, Wing Building for Science Complex	
彭迎涛 (Web Group)	报告题目：Knowledge Graph Convolutional Networks for Recommender Systems 报告摘要：To alleviate sparsity and cold start problem of collaborative filtering based recommender systems, researchers and engineers usually collect attributes of users and items, and design delicate algorithms to exploit these additional information. In general, the attributes are not isolated but connected with each other, which forms a knowledge graph (KG). In this paper, we propose Knowledge Graph Convolutional Networks (KGCN), an end-to-end framework that captures inter-item relatedness effectively by mining their associated attributes on the KG. To automatically discover both high-order structure information and semantic information of the KG, we sample from the neighbors for each entity in the KG as their receptive field, then combine neighborhood information with bias when

	calculating the representation of a given entity. The receptive field can be extended to multiple hops away to model high-order proximity information and capture users' potential long-distance interests. Moreover, we implement the proposed KGCN in a minibatch fashion, which enables our model to operate on large datasets and KGs. We apply the proposed model to three datasets about movie, book, and music recommendation, and experiment results demonstrate that our approach outperforms strong recommender baselines
2020.12.1 FL1, Wing Building for Science Complex	
彭迎涛 (Web Group)	报告题目：KGAT: Knowledge Graph Attention Network for Recommendation 报告摘要：To provide more accurate, diverse, and explainable recommendation, it is compulsory to go beyond modeling user-item interactions and take side information into account. Traditional methods like factorization machine (FM) cast it as a supervised learning problem, which assumes each interaction as an independent instance with side information encoded. Due to the overlook of the relations among instances or items (e.g., the director of a movie is also an actor of another movie), these methods are insufficient to distill the collaborative signal from the collective behaviors of users. In this work, we investigate the utility of knowledge graph (KG), which breaks down the independent interaction assumption by linking items with their attributes. We argue that in such a hybrid structure of KG and user-item graph, high-order relations — which connect two items with one or multiple linked attributes — are an essential factor for successful recommendation. We propose a new method named Knowledge Graph Attention Network (KGAT) which explicitly models the high-order connectivities in KG in an end-to-end fashion. It recursively propagates the embeddings from a node's neighbors (which can be users, items, or attributes) to refine the node's embedding, and employs an attention mechanism to discriminate the importance of the neighbors. Our KGAT is conceptually advantageous to existing KG-based recommendation methods, which either exploit high-order relations by extracting paths or implicitly modeling them with regularization. Empirical results on three public benchmarks show that KGAT significantly outperforms state-of-the-art methods like Neural FM and RippleNet. Further studies verify the efficacy of embedding propagation for high-order relation modeling and the interpretability benefits brought by the attention mechanism.
2020.12.08 FL1, Wing Building for Science Complex	
但唐朋 (Cloud Group)	报告题目：Sample Factory: Egocentric 3D Control from Pixels at 100000 FPS with Asynchronous Reinforcement Learning 报告摘要：Increasing the scale of reinforcement learning experiments has allowed researchers to achieve unprecedented results in both training sophisticated agents for video games, and in sim-to-real transfer for robotics. Typically such experiments rely on large distributed systems and require expensive hardware setups, limiting wider access to this exciting area of research. In this work we aim to solve this problem by optimizing the efficiency and resource utilization of

	reinforcement learning algorithms instead of relying on distributed computation. We present the "Sample Factory", a high-throughput training system optimized for a single-machine setting. Our architecture combines a highly efficient, asynchronous, GPU-based sampler with off-policy correction techniques, allowing us to achieve throughput higher than 10^5 environment frames/second on non-trivial control problems in 3D without sacrificing sample efficiency. We extend Sample Factory to support self-play and population-based training and apply these techniques to train highly capable agents for a multiplayer first-person shooter game.
2021.01.05	**FL1, Wing Building for Science Complex**
彭迎涛 (Web Group)	报告题目：IRGAN: A Minimax Game for Unifying Generative and Discriminative Information Retrieval Models 报告摘要： This paper provides a unified account of two schools of thinking in information retrieval modelling: the generative retrieval focusing on predicting relevant documents given a query, and the discriminative retrieval focusing on predicting relevancy given a query-document pair. We propose a game theoretical minimax game to iteratively optimise both models. On one hand, the discriminative model, aiming to mine signals from labelled and unlabelled data, provides guidance to train the generative model towards fitting the underlying relevance distribution over documents given the query. On the other hand, the generative model, acting as an attacker to the current discriminative model, generates difficult examples for the discriminative model in an adversarial way by minimising its discrimination objective. With the competition between these two models, we show that the unified framework takes advantage of both schools of thinking: (i) the generative model learns to fit the relevance distribution over documents via the signals from the discriminative model, and (ii) the discriminative model is able to exploit the unlabelled data selected by the generative model to achieve a better estimation for document ranking.

实验室网站



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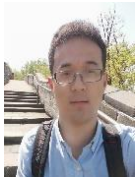

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实验室新生感言

但唐朋　2020 级博士研究生

“不积跬步，无以至千里；不积小流，无以成江海”。继承和积累是科研学习的诀窍，坚持与信心是向前进步的法则。进入 WAMDM 这一位列国际顶尖实验室的同时也应该对自己有新的要求，新的目标和新的期待。当激动，紧张，期待都融汇一体时，剩下的只有久久的感动。感动着，来到新的一个出发点，感动着，认识那些生命里注将相遇相识的人。道阻且长，行则必至。新的挑丰富多彩惹人眼花缭乱，无时无刻在锻炼自己的综合能力。而我相信，我所经历的一切都是在都在为自身和社会的精彩添砖加瓦。

诚然，未来的道路上肯定会遇到各种各样的困难，但我相信在孟老师和实验室师兄师姐的帮助下自己一定能够不怕困难坚持初心，砥砺前行，不言放弃，保持进步。

彭迎涛　2020 级博士研究生

时光荏苒，悄然而逝，今天是 2021 年的第一天，博士入学已有近三个月的时间。人大在我心目中，不仅是学术的殿堂，更是心仪之选。正所谓知晓愈多，印象愈深，志向愈坚，情感愈浓，来到 WAMDM 实验室后，在这里聆听孟老师的谆谆教诲，在这里结识出类拔萃的师兄师姐，在这最美的年华相聚在最好的地方，体验和谐温馨的生活环境，享受丰富多彩的学术资源。

我知道，选择这里就是选择了与优秀的人在为伍，选择了攻读博士学位，就是选择了与笃定的自己为伴。因此，作为一名博士新生，我不仅要多和朋辈们多多交流，在侃侃而谈中碰撞出思想的火花，更要学会与自己独处，在孜孜不倦中探寻科研的奥秘。还记得在一篇文章中看到：“读博这条路艰辛、漫长、疲惫，充满了沮丧和失败，当梦想照进现实，你是否真的有勇气坚持到底？站在博士学习生涯的起点上扪心自问，也许很难给出一个肯定的答案”。但即使前路漫漫，并非坦途，我也应该始终保持乐观的精神、健康的体魄、求知的热情和专注的态度，大胆前行，不言放弃，正谓之“是非经过不知难，成如容易却辛艰”。

希望在博士阶段，自己能够仰望星空、脚踏实地、无愧于心，顺利通过大小论文两个难关，完成对自我思想的重塑，升华对数据挖掘领域的认识，具备最严谨有效解决问题的能力。同样希望博士毕业之后，无论在学术之田深耕不辍，还是在业界机构大展身手，自己都能够带着博士期间收获的宝贵财富，在未来的道路上愈走愈远。

范卓娅　2020 级硕士研究生

从 2019 年 2 月 10 日决定加入实验室到现在已经快两年了，时间真是过得飞快。在这两年中，我不仅学到了知识技能，也学到了很多做人做事的道理，非常感恩师兄师姐的朝夕相伴和孟老师的关怀指导。

2020 年经历了太多事情，我发现原来稀松平常、不以为意的生活点滴都那么可贵。转眼间，这一年也像被按了快进键一样变成了过去。希望自己能更加珍惜短暂的研究生生活，以优秀的师兄师姐为榜样，在有限的时间里做出更多有价值的事情。

毕业生寄语

叶青青　2020 届博士毕业　香港理工大学，研究助理教授

时间飞逝，不知不觉中距离毕业已过半载。庆幸五年博士生涯的训练，让自己能够继续从事所热爱的科研工作。

至今仍清楚地记得五年前第一次来到 WAMDM 实验室的情景，那是第一次参加实验室例会，充分感受到属于这个集体的满满的能量。自那以后，每周一次的大组会成为了惯例，或讨论，或报告，或聆听，不仅锻炼了演讲和汇报的能力，而且拓宽了认知和研究的角度。在实验室的几年时间里，以自律和努力为习惯，以学习和研究为目标，终于成长为一名合格的 PhD。回首五年读博生涯，似乎弹指一挥间，却也是一段格外美好的经历。平淡的日子枯燥乏味，奋斗的日子则格外充实。读博就是这样一个奋斗的过程，不乏初入课题时的迷茫，发现 idea 时的欣喜，推倒重来的勇气，锲而不舍的坚持，论文录用时的激动和豁然开朗的心境。如此循环往复，锻炼科研能力，完成读博使命，收获人生阅历。心中万分感激孟老师所给予的机会和栽培，感谢 WAMDM 实验室的支持，感念实验室同学们一路相伴前行，最终收获一段珍贵的人生经历。此外，在香港理工大学的交流经历，结识胡老师这样一位良师益友实乃人生之幸，学习能力的培养，科研能力的提升，工作生活的技巧，胡老师亦教会了我许多，心里由衷感激。

五年博士生涯，大都在实验室和宿舍的两点一线间度过，虽单调，却为后续的发展打下了坚实的基础；中途的闲暇时光虽然短暂，却未曾错过沿路的风景。博一入学的第一个月去了哈尔滨参加大创年会，第一次论文报告，甚至不知道需要准备 slides。博二上学期，首届隐私保护会议的筹备和举办工作，虽然心力交瘁，却真真切切锻炼了工作能力；博二下学期第一次来到香港，全身心专注科研工作，茶余饭后的一点时间，喜欢漫步在维港边上感受海风徐徐，在天星小轮上眺望无垠的大海，在太平山顶欣赏云雾缭绕，在观景台上俯瞰香港的美丽夜景。博三回到了实验室，这一年里最大的收获莫过于 S&P 的论文录用，体验到科研转化为成果的欣喜。博四再次来到香港，研究方面完成了图数据和流数据两个工作，投稿过程可谓一路坎坷，庆幸最终去到 ICDE, TKDE 和 INFOCOM，也算是个好归宿。大半年在香港的时间里，每周少有的闲暇时光，或流连于山水风光，或徜徉在丛林小径，像一只快乐的小小鸟，黄金海岸海风习习，船湾淡水湖细雨蒙蒙，金山郊野公园可爱的小猴子漫山遍野，邮轮码头公园里的一席交流，最高峰大帽山上的一番感悟，滘西洲高尔夫球场的一次尝试。当然，还有美国 S&P 之行，不亦乐乎。博五回到人大，在校时间其实只有短短一个学期，新冠疫情提前结束了在校生活。

2020 是个很特殊的年份，疫情对我们的生活产生了巨大的影响，无论是对老师和学生，还是对家庭和个人。但对于我，2020 保留了一份 “仁慈”，毕业、工作和生活都很顺利。来到香港理工大学任教，工作内容无外乎教学和科研。人生中第一次以老师的身份站在“讲台”上是在今年的教师节，依然记得上课前心里格外紧张，上完课心里也格外激动。科研上，除了课题研究，还需要申请研究经费，这是与博士阶段的研究很大的不同。繁忙之中半年的时光悄然而逝，庆幸从中学习了很多，体验了很多，在学习和体验的过程中不断成长。

最后衷心祝愿孟老师身体安康，祝愿 WAMDM 实验室越来越好！

王硕　2020 届博士毕业　河北大学

转眼间毕业已经半年了，上半年虽然经历了新冠疫情的干扰没能返校，但是还是会经常想起人大校园里的银杏、樱花和白玉兰，有时梦里还会坐在实验室的工位上忙碌着，五年的求学之路如同电影一般浮现在眼前。

2015 年的金秋季节，我第一次和实验室的老师和同学们坐在会议室中开会，当时对 NLP 这个英文缩写还十分陌生，毫无概念；接下来的两年，通过艰苦学习和探索，自己终于掌握了自然语言处理的相关技术和知识融合的一般方法；孟老师也没有看低我这名门外汉，带我出国参加了很多会议，这在我读博之前是从来没有想到过的历练和经验；实验室的研究工作在国内科研领域也十分活跃，定期召开的研讨会和项目工作会议使我见识了科研团队间的交流与合作，参加的各类全国学术会议让我积累了很多专业知识和学术上的朋友；在实验室的日常事务工作中，孟老师也给了我锻炼自己的机会，使我可以从容面对很多自己从前并不熟悉的事务，增强了自己的时间管理和规划能力。

我在实验室紧张而有节奏的学习与生活中不断成长，直到成为别人口中的师兄，5 年的成长和历练使我变得更加自信、自律和自强，实验室不仅让我在学术上有了进步，也让我在生活与工作中有了更大的动力。感谢 WAMDM 实验室，愿你一如既往地坚持自己的道路，阔步向前，也希望 WAMDM 实验室的同学们更加努力，为实验室谱写新的篇章。

毕业有感而作：

语言今日成吾念，
寄迹学海渡华年，
业在君心苦亦得，
毕生何处似此贤。

杨晨　2020 届博士毕业　中国人民银行清算总中心

五年的博士学习生涯，在毕业之后回首看来依然是五味杂陈，其终究在我的生命中留下浓墨重彩的一笔。孟子有云“故天将降大任于是人也，必先苦其心志，劳其筋骨，饿其体肤，空乏其身，行拂乱其所为，所以动心忍性，曾益其所不能。”从修行的角度而言，想要“益其所不能”， 前面的“苦其心志”是必不可少的，这也是读博期间所必须经历的，也感谢孟老师和实验室给予了这样一个环境，让我初探了 “从心所欲而不逾矩”的创新思维能力，获得了人生中宝贵的一段经历。

在实验室工作期间，首先深深地感谢我的导师孟小峰教授。首先，孟老师引领我走入了大数据分析的研究领域，并结合实际的项目，能够边研究边实践，这是一段宝贵的经验，让我在走入工作岗位不畏惧任何挑战，既可以探究创新理论问题，又可以实际参与具体研发工作。此外，孟老师对新知识不断追求的激情、严谨的治学态度、一丝不苟的做事方式和认真负责的做事态度，无时无刻不在教育和感染着我，这些都将使我受益终生。在此，谨向孟老师表示最诚挚的谢意！

写下这段感言的时候，也深深地怀念实验室的兄弟姐妹们，大家在一起学习工作中能够守望相助，建立了很深的情谊。在大家集中开发的日子里，虽然很辛苦，但反而那段日子留下了深刻的记忆，历经弥新。和实验室同学在一起的日子总是充满了欢声笑语，能够与你

们一起度过博士生涯是我的荣幸。

在实验室学习期间，虽然过程是曲折的，但是毕业后能明显感觉到自身的能力的成长。因此，在这里也希望还在实验室耕读的师弟师妹们，守住本心，坚持下去，在孟老师的引领下，实验室必定以后会越来越好，大家的前途必定可期。

吴新乐　2020 届硕士毕业　奥尔堡大学 phD

毕业半年，回想起在 WAMDM 实验室度过的时光，心中依旧充满不舍。非常感谢孟老师三年来对我的教导，教给我很多知识和做人的道理，孟老师始终是我科研之路上的 lighthouse，指引我激励我。WAMDM 实验室像一个温馨融洽的大家庭，我在其中度过了充实难忘的三年，感谢在此期间各位师兄弟姐妹们的帮助，我会一直想念你们的。非常荣幸自己曾经是 WAMDM 实验室的一份子，也希望实验室发展得越来越好。

杜永杰　2020 届硕士毕业　中国农业银行

时光飞逝，转眼三年。过去的三年里，有和师兄师姐一起在实验室学习的快乐，也有和大家一起赴怀柔集中开发的艰辛，还有登山看星辰大海的激动。在实验室里，总有人在你困难的时候帮你克服，总有人在你成功的时候与你分享喜悦，总有人在你懈怠的时候督促你前行。在研究生学习生涯中，不仅收获了宝贵的知识财富，而且很庆幸能跟着孟老师学到了很多书本之外的东西，还很开心能结识一群充满活力的同学。但遗憾的是大家只能云答辩和云毕业，没能在毕业季相聚实验室，没能和孟老师挥手道别。希望以后大家常聚实验室，也希望这个大家庭越来越好。

段志强　2020 届硕士毕业　中国农业银行

很感谢这三年的学习和奋斗，让我能够接触到这么多优秀的人和能磨炼我的事情，我在这三年当中学习到了更专业的计算机知识，学到了如何进行科学研究。我在这三年中经历的每一件事情都会深刻的影响到我以后的生活，接触到的每一个人都会让我更加具有奋进的精神。这些都不断的促使我一步步的上升。首先要感谢我的导师孟小峰教授，我幸运的在研究生期间能遇到孟老师这样一位对待学术严谨认真、对待学生严格关怀的导师。感谢孟老师对我一直以来的指导和提点，孟老师的对学术的态度是我终身学习和追求的榜样，也是日后职业生涯中始终引导我的灯塔。感谢 WAMDM 的全体成员。尤其是杨晨师兄和杜永杰，没有杨晨师兄的帮助我无法在严苛的学术道路上一直前进，他一直在我学术和生活的道路上带着我前进，帮助我克服一个又一个的难题。感谢永杰一直以来的陪伴，我们同入实验室，在这三年的学习和生活当中互帮互助，共同前进。最后祝愿 WAMDM 实验室越来越好。

吴永泰　2020 届硕士毕业　生命奇点（北京）科技有限公司

时光飞逝，三年的学习时光一转眼就过去了。感谢孟小峰教授，作为领路人，带领我们进入学术的殿堂。孟老师给我最深刻的印象就是渊博的知识、对待学术的严谨态度、诲人不倦的教育理念、对待行业大趋势的敏锐洞察力和风趣的说话方式，让我在实验室三年的时间受益匪浅，感谢孟老师的言传身教和三年的培养。

同时，我也要感谢这三年陪伴我走过来的师兄师姐和小伙伴。三年来，我们朝夕相处，一起学习，相互鼓励，共同进步，让三年的生活和学习时光充满了欢声和笑语。

三年的时间，回忆种种，满满的都是收获。希望未来的自己更成熟、努力，希望实验室在孟老师的带领下继续创造更辉煌的未来。

王飞　2020 届硕士毕业　京东

两年的时间，时光飞逝，WAMDM 实验室哺育了我，使我从初入硕士懵懂与初探科学的迷茫到找到自己道路，坚定自己的信念前进。当真正走向社会，总是珍惜学生时光，每当看到校园总是回忆起当时的一点一滴，仿佛就在昨日。尤其是人大的生活，三点一线的节奏，纵向的知识探索与横向的综合提升，感恩机遇让我来到人大，来到 WAMDM 实验室。“惠施多方，其书五车”，孟老师的给我们的不仅仅是计算机领域的专业知识，更是哲学明义的人生道理，这一切促使着我养成了良好的学习研究习惯与严谨务实的工作态度。北京是一个神奇的城市，有视野蒙蒙的雾霾弥漫也有艳阳高照的晴空万里。孟老师曾说过“每个人心中都要有自己的灯塔”。从当年的懵懂与研究生阶段的寻觅，到现今的明晰，心中有灯塔，纵使雾霾弥漫，也能拨开云雾见光明。

杨鑫　2020 届硕士毕业　上海蔚来汽车有限公司

从踏进人大校园开始，就注定我会有一段奇妙的经历。美国政治家罗斯福说过：“对明天的认识的唯一限度，取决于我们今天的怀疑”。我的硕士生活也是从怀疑开始，怀疑我的选择，怀疑未来是否坦途，怀疑我是否能行……

攻读硕士期间，孟老师将我引领入一个全新的学术领域，他严谨认真，创新活跃的科研精神让我受益匪浅。至今对孟老师的一句话印象深刻：“我的重点不是教给你们具体的技术，尤其是计算机学科，那个很快就过时了，我想教给你们的是一种思维方式和学习能力，这会让你们经受住任何考验”。

转眼间，毕业半年。在新的工作岗位，依然践行实验室严谨、创新的精神，一丝不苟，脚踏实地，努力在自己的工作岗位干出成绩。

汤庆　2020 届硕士毕业　商汤科技开发有限公司

我很荣幸能够来到 WAMDM 实验室学习深造，能和这样一群优秀、友爱又有趣的人度过研究生生涯的三年时光。感谢孟老师的教诲，也感谢师兄师姐师弟师妹们的帮助。毕业了，我们有着过去的不舍，也有着对未来的憧憬，就像孟老师在会议室里边挂的字一样，"日日是好日",愿我们都能好好珍惜每一天，享受每一天。

2020 年毕业生去向

姓名	学历	时间	毕业去向
叶青青	博士	2020 年 7 月	香港理工大学，研究助理教授
王硕	博士	2020 年 7 月	河北大学
杨晨	博士	2020 年 7 月	中国人民银行清算总中心
吴新乐	硕士	2020 年 7 月	奥尔堡大学 phD
杜永杰	硕士	2020 年 7 月	中国农业银行
段志强	硕士	2020 年 7 月	中国农业银行
吴永泰	硕士	2020 年 7 月	生命奇点（北京）科技有限公司
王飞	硕士	2020 年 7 月	京东
杨鑫	硕士	2020 年 7 月	上海蔚来汽车有限公司
汤庆	硕士	2020 年 7 月	商汤科技开发有限公司