Chunliang Lyu

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EDUCATION

The Chinese University of Hong Kong, Ph.D.	2011 - 2016
• Research Area: Entity Retrieval, Natural Language Processing, Knowledge Graph.	
National Taiwan University of Science and Technology, Visiting Student	2011 - 2011
Beijing Institute of Technology, B.S. in Information Engineering, GPA 3.9	2007 - 2011

PROJECTS

Hyperlink (https://hyperlinkapp.com), Co-founder

2014 - 2015

Hyperlink is a unified platform for searching and managing personal information streams across 13 online services, such as social updates from Twitter and cloud files from Dropbox.

- Developed the backend in Python 3, with Flask/PostgreSQL/ElasticSearch/Celery as main stack.
- Designed the frontend using AngularJS, including extensive unit and end-to-end testing.
- Deployed and optimized the system on Amazon Web Services to support up to 10K concurrent users.

SwitchPal, Project Leader

2014 - 2015

SwitchPal is a device that snaps over an existing switch and turn it into a smart one. Equipped with multiple sensors, it can automate household appliances according to personal preferences.

- Designed the hardware based on the TI CC2540 MCU, controllable via a custom Bluetooth 4.0 profile.
- Implemented and released the iOS and Android companion apps.
- Saved more than 2/3 electricity by deploying to student hostels to automatically control the air conditioners.

Entity Modeling and Retrieval System, Principle Researcher

2012 - 2015

Proposed a novel entity retrieval system based on entity factoid hierarchy, together with a new entity model considering the HTML structure in webpages. Significantly improved the state-of-the-art performance.

- Consolidated information about millions of entities from ClueWeb09 (25TB), Freebase (380GB) and DBpedia.
- Designed an entity processing pipeline based on Spark, decreasing the processing time from days to hours.
- Implemented multiple retrieval models in Lucene, with customized query analyzer to handle entity queries.

Twitter Recommendation System, Principle Researcher

2011 - 2012

Built a personalized tweets recommendation system based on user profiles, achieved superior performance.

- Constructed user profiles by aggregating keywords in tweets and propagating interests among friends.
- Crawled millions of tweets from hundreds of thousands of Twitter users to test the system.

TECHNICAL SKILLS

- Language: Scala, Python, Java, JavaScript, PHP, C++
- Database: PostgreSQL, MongoDB, MySQL
- Framework: ElasticSearch, Lucene, Hadoop, Spark, ReactJS, AngularJS
- Tool: Git, Gulp, Linux, Docker, Amazon Web Services

EXPERIENCE

- Semi-finalist in the 2015 Global Venture Labs Investment Competition, 2015
- Teaching Assistant for four undergraduate engineering courses at CUHK, 2012-2015
- Volunteer for the Charles K Kao Foundation for Alzheimer's Disease, 2011
- Organizer of the 6th Information Security and Countermeasures Contest, 2010
- Meritorious Winner in Mathematical Contest In Modeling, 2009

SELECTED PUBLICATIONS

- C. Lu, W. Lam, Y. Liao. Entity Retrieval via Entity Factoid Hierarchy. In: *Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics (ACL)*. 2015.
- C. Lu, L. Bing, W. Lam. Structured Positional Entity Language Model for Enterprise Entity Retrieval. In: *Proceedings of the 22nd ACM Conference on Information and Knowledge Management (CIKM)*. 2013.