Yanan Xie

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EDUCATION

- **University of California, Santa Cruz** — Santa Cruz, CA
  Master of Science in Computer Science; Advisor: Prof. Yi Zhang — *Sep. 2016 – Dec. 2017(expected)*
  ○ **Major courses**: Algorithm Analysis, Image Processing and Computer Vision, Design Database Systems, Data Mining
- **Zhejiang University** — Hangzhou, China
  Bachelor of Engineering in Computer Science; Advisor: Prof. Jian Wu — *Sep. 2010 – June. 2014*
  ○ **Major courses**: C Programming, Database System, Data Structure, Artificial Intelligence, Computer Security

EXPERIENCE

- **Google** — Mountain View, California
  Software Engineering Intern — *Jun 2017 - Sep 2017*
  ○ **Data Migration Design**: Designed the process to migrate a table from Google's internal KVS - Kansas to another internal DBMS - Spanner. The table serves several applications with different data consistency requirements.
  ○ **Independent Service Development**: Developed and launched an independent service in Java with several Google technologies - Apps Framework, Boq, Guice, Kansas, Protocol Buffer, Spanner. The service is used as an intermediary layer between applications and database to hide database migration process from applications.
  ○ **Data Processing**: Wrote a flume job to convert massive log files from protobuf format to human-readable text format.
- **WithMe(Early Stage Startup)** — Hangzhou, China
  Full-Stack Developer — *Aug 2015 - Aug 2016*
  ○ **Prototyping**: Fast built an MVP(a hybrid app) in days to verify key business assumptions.
  ○ **Leadership**: Successfully led the iOS dev team of 3 delivering high-quality apps on time. Provided data structure and algorithm training to all engineers inside the company.
  ○ **ORM Component**: Developed a thread-safe ORM component WMCache based on SQLite3 and Objective-C runtime methods. It is still used as a fundamental component in apps developed by WithMe.
  ○ **Data Synchronization**: Designed the basic data synchronization strategy, and implemented a multi-observer listener component which has significantly reduced the complexity of data logic, and is still used as a fundamental component.
- **Alibaba** — Hangzhou, China
  Software Development Engineer — *Jun 2014 - May 2015*
  ○ **Crowd-Sourcing Data Labeling System**: Built the whole system including the front end and back end. Implemented a random pre-assignment mechanism to implement a high-performance task distribution system, handling over 1,000,000 labeled data per day with a single server.
  ○ **Search Engine Debug and Test Toolbox**: Built several internal tools including stress simulation, search engine pipeline visualization and search result evaluation for search algorithm groups.

PROJECTS

- **Persistent Key-Value Store**: Implemented a KVS from scratch using memory-mapped I/O APIs, Trie-based algorithms. It outperforms industrial-level systems like Redis on SSD in terms of throughput and speed of recovering from data file.
- **Personal News Radio**: An iOS app which recommends news to users based on implicit feedback. A reinforcement learning was exploited for news recommendation.
- **Mini Database**: Developed a relational database supports basic SQL grammars including *create table*, *create index*, *insert*, *delete*, and *select*. B+ tree was implemented as the indexing data structure. Written in C.
- **Book Price Comparison Portal**: Built a price comparison website and search engine for Chinese books. Achieved 18,000 DAU / 1,000,000 pages indexed by Baidu. Stochastic DFS algorithm was utilized to recommend purchase strategies.

PUBLICATIONS

1. Shengqi Yang, **Yanan Xie**, Yinghui Wu, Tianyu Wu, Huan Sun, Jian Wu and Xifeng Yan. "SLQ: A User-friendly Graph Querying System." *ACM SIGMOD Conference on Management of Data (SIGMOD 2014 Demo)*, Snowbird, Utah, USA. June 22 - 27, 2014.
2. **Yanan Xie**, Liang Chen, Kunyang Jia, Lichuan Ji, Jian Wu. "iNewsBox: Modeling and Exploiting Implicit Feedback for Building Personalized News Radio." *ACM Conference on Information and Knowledge Management (CIKM 2013 Demo)*, Burlingame, CA, USA. Oct 27 - Nov 1, 2013.
3. Jian Wu, Liang Chen, **Yanan Xie**, Lichuan Ji, Zhaohui Wu. "Modeling and Exploring Historical Records to Facilitate Service Composition." *International Journal of Web and Grid Services (IJWGS)*(accepted in April 2013).
4. Hanze Xu, **Yanan Xie**, Dinglong Duan, Liang Chen, Jian Wu. "FTCRank: Ranking Components for Building Highly Reliable Cloud Applications." *17th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2013 Workshop)*, Gold Coast, Australia. April 14 - 17, 2013.
5. Jian Wu, Liang Chen, **Yanan Xie**, Zibin Zheng. "Titan: A System for Effective Web Service Discovery." *21th International World Wide Web Conference (WWW 2012 Demo)*, Lyon, France. April 16-20, 2012.