

# Yanan Xie

http://www.lorabit.com

Email : lorabit@me.com

Mobile : +1-831-346-9038

## EXPERIENCE

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- **Rulai** Campbell, California  
*Senior AI Research Engineer* *Feb 2018 - Present*
  - **Multi-Round Conversational Database Querying:** Designing and developing an easy-to-use product for designing data querying chatbot with dynamic flows. (as eng owner)
  - **Question Answering with Knowledge Graph:** Exploring the latest natural language processing and machine learning techniques to build Rulai's knowledge graph module enabling AI chatbots to answer questions based on knowledge graphs.
  - **Vertical Library Creation:** Building tools to collect data for creating vertical libraries.
- **Google** Mountain View, California  
*Software Engineering Intern (I did get my conversion offer)* *Jun 2017 - Sep 2017*
  - **Data Migration:** Designed the process to migrate a table that was heavily used by multiple products from Google's internal KVS - Kansas to another internal DBMS - Spanner with zero downtime. The table serves several applications with different data consistency requirements. Developed and launched an independent service from scratch 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:** Used Google's planet-scale data processing tools to process massive log data.
- **WithMe(Early Stage Startup)** Hangzhou, China  
*Founding Full-Stack Engineer, Team Leader* *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 (Top 10% performer)* *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 and machine learning teams.
- **University of California, Santa Barbara** Santa Barbara, CA  
*Visiting Student* *May 2013 - Oct 2013*
  - **Natural Language Parser:** Built a knowledge-graph-based natural language parser for parsing nested sentences.
  - **Open Information Extraction:** Constructed knowledge graphs from witness statements by using named entity recognition, coreference resolution, and the parser.
  - **Quering Knowledge Graphs:** Developed an interactive knowledge graph explorer and a graph query composer with JavaScript and Java. Published a demo paper in SIGMOD 2014.

## EDUCATION

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- **University of California, Santa Cruz** Santa Cruz, CA  
*Master of Science in Computer Science; Advisor: Prof. Yi Zhang* *Sep. 2016 - Dec. 2017*
- **Zhejiang University** Hangzhou, China  
*Bachelor of Engineering in Computer Science; Advisor: Prof. Jian Wu* *Sep. 2010 - June. 2014*

## SKILLS

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- **AI and Data Science :** Industrial experience with PyTorch and TensorFlow. Demos/papers accepted to top conferences like SIGMOD, CIKM, WWW, PAKDD.
- **Full-Stack Development:** Unix/Linux, MySQL, MongoDB, Redis, PHP(Yii), NGINX, Java(Guava, Guice, Spring), gRPC(protobuf), Git, Docker, Jenkins, JavaScript(Vue.js, Koa), Photoshop, Objective-C.
- **Product Management:** Hands-on experience applying Lean Startup methodology to develop product iteratively and search for product/market fit.