

# XU HAN

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## EDUCATION

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### **Ph.D. Student in Computer Science**

*Sep 2017 - May 2022*

University of Colorado Boulder, Boulder, USA

Research Interests: Human Computer Interaction, Data Science, Data Visualization

Advisor: Tom Yeh    GPA: 3.97 /4.0

### **B.E. in Electronic Engineering**

*Sep 2013 - Jun 2017*

University of Science and Technology of China, Hefei, China

Undergraduate Thesis: Contact-free Camera Measurements of Heart Rate under Practical Scenario

Advisor: Joern Ostermann, Zhibo Chen

## PUBLICATIONS

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[1] **Xu, Han**, and Tom Yeh. 2020. How does your Alexa behave?: Evaluating Voice Applications by Design Guidelines Using an Automatic Voice Crawler. *To appear in Joint Proceedings of the ACM IUI 2020 Workshops, March 17, 2020, 10 pages.*

[2] **Xu Han** and Tom Yeh. 2019. Evaluating Voice Applications by User-Aware Design Guidelines Using an Automatic Voice Crawler. *In Joint Proceedings of the ACM IUI 2019 Workshops, Los Angeles, USA, March 20, 2019 , 4 pages.*

[3] Shiroma, K., Davis, N., Yeh, T., **Xu, H.**, Sagna, A., & Xie, B. (2019). Co-Designing eHealth tutorials with and for older adults. *Presented at the Healthier Texas Summit. October 17 - 18, 2019. Austin, Texas.*

## RESEARCH PROJECTS / EXPERIENCES

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### **Digression and Sensitive Information Analysis on Interviewer Chatbot**

*Aug 2019 - Present*

University of Colorado Boulder, USA

- Working on an evaluation framework of Interviewer chatbot (digression & sensitive information detection)
- Conducted digression and privacy leakage analysis based on original user-chatbot transcripts using deep learning models

### **Live Tweets Analysis and Visualization System**

*Feb 2019 - Apr 2019*

University of Colorado Boulder, USA

- Implemented a big data framework based on twitter data with Kafka (streaming processing), Pyspark (sentimental analysis with NLTK), MongoDB, Elastic Search & Kibana (visualization)
- A dashboard was built for visualization of sentimental data analysis results using Flask

### **Alexa Skills Evaluation**

*Jun 2018 - Sep 2018*

Sikuli Lab, University of Colorado Boulder, USA

- Developed a voice skill crawler to collect responses data from 45708 Aelxa skills (Python)
- Deployed deep learning models with pre-trained/self-trained embeddings to do Alexa skills' topic classification (PyTorch)
- Analyzed responses data of the most 100 popular Alexa skills and studied these skills' compliance situations of current design guidelines
- Proposed research agenda for future evaluation tool development (published research papers [1][2])

## Repeat Buyer Prediction Based on User Online Shopping Logs

Oct 2017 - Dec 2017

University of Colorado Boulder, USA

- Deployed machine learning techniques to predict whether a customer will become a repeat buyer (Python, SQL)
- Focused on feature engineering, extracted 129 features(user demographic features, user behavioral features, merchant-related features, user-merchant interaction features, big promotion features, slope features, similarity features, PCA features) and conducted feature ranking analysis
- Ranked top 25 in the competition panel

## RELEVANT SKILLS

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Languages: C, C++, Python, Javascript, HTML & CSS, SQL, MATLAB

System & Library: PostgreSQL, Git, Linux, openGL, D3, Kibana, ElasticSearch, PyTorch

Software: Tableau

## AWARDS

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Graduate Travel Grant, University of Colorado Boulder	2019
CSC(China Scholarship Council) National Scholarship	2017
UTSIP Scholarship, University of Tokyo	2016
Outstanding Student Scholarship, University of Science and Technology of China	2016, 2015, 2014
The Best Technology Award, Robogame2015, University of Science and Technology of China	2015