Yuwei Zhang

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EDUCATION

Fudan University   **Shanghai, China**

Bachelor of Science in Computer Science   *Sep. 2018 - Jul. 2022(expected)*

o   Major GPA: **3.9/4.0**, School Rank:**2/153**

o   Selected awards: 2021: Shanghai Scholarship (Top 1%); 2020 and 2019: Chinese National
     Scholarship (Top 1%); 2018: Freshman Admission Scholarship of Tengfei College (Top 2%)

PUBLICATIONS

(# denotes Co-First author)

1. Structural Hole Theory in Social Network Analysis: A Review.
   Zihang Lin#, **Yuwei Zhang**#, Qingyuan Gong, Yang Chen, Atte Oksanen, Aaron Yi Ding.
   To appear: *IEEE Transactions on Computational Social Systems (TCSS)*.

2. A Human Mobility Dataset Collected via LBSLab.
   Yuwei Zhang, Qingyuan Gong, Yang Chen, Yu Xiao, Xin Wang, Pan Hui, and Xiaoming Fu.
   Under review: *Scientific Data* (Nature Publishing Group).

RESEARCH EXPERIENCE

Mining Mobility Patterns using Shanghai Smart Card Data   **University of Göttingen**

Advisor: Prof. Xiaoming Fu (IEEE Fellow)   *Jun. 2021 – Present*

o   Use mobility data (over 5 million records per day, spanning two years) to cluster metro
     stations into 3 regions and analyze their features, such as POIs

o   Analyze different mobility patterns in Shanghai Metro (weekday v.s. weekend, commuter
     v.s. tourist, etc), detecting and explaining anomalies to monitor special events

o   Adopt network analysis methods to examine mobility network between metro stations and
     measure their influence, aiming to provide insights into Shanghai urban planning

Data Analysis of LBSLab, a Mobile-centric Data Collection Platform   **Fudan University**

Advisor: Prof. Yang Chen   *Jan. 2021 – Present*

o   Performed analysis on the mobile check-in data of 467 students collected by LBSLab, a
     WeChat mini-program that has attracted more than 2,000 users and gathers users'
     heterogeneous activity data

o   Analyzed the spatial and temporal patterns of the user behaviors along with influence on
     users' moods, with visualizations using MATLAB

o   Contributed a first-author paper, submitted to *Scientific Data* (Nature Publishing Group)

Mobile Application Usage Analysis and Prediction   **Fudan University**

Advisor: Prof. Yang Chen   *Mar. 2020 – Dec.2020*

o   Constructed an app usage graph to understand the co-occurrence of apps in users' app
     usage records, considering time and location

o   Trained an LSTM-based personalized model for app prediction problem, increasing F1-
     score from 0.85 to 0.94

o   Applied GCN to generate embeddings for the mobile apps and incorporated the app
     embedding as a global pattern into the prediction model to resolve data sparsity and cold-
     start problems

Reviewing Structural Hole Theory in Social Network Analysis　　　　**Fudan University**

Advisor: Prof. Yang Chen　　　　　　　　　　　　　　　　　　*Jan. 2020 – Mar.2021*

- Provided a comprehensive review on the development of structural hole (SH) theory, SH spanner detection algorithms and SH-related applications in diverse fields
- Identified potential research trends, giving insights for facilitating researchers and service providers to better apply the theory
- Contributed to a co-first author paper accepted by *IEEE Transactions on Computational Social Systems (TCSS)*

PROJECT EXPERIENCE

Food Recipes Classifier and Random Generator, NLP Course Project　　*Oct. 2020 - Jan. 2021*

- Performed data preprocessing using Python and regular expressions to extract ingredients, conducted data distribution analysis and visualized using Python
- Built LR classifiers to predict cuisine and courses of a recipe, using features ranging from Bag of Words, TF-IDF and word2vec embeddings, achieving a 0.735 F1-score for a multi-class classification task with 22 classes
- Fine-tuned a GPT-2 model to train a random food recipes generator

Music Genre Converter, Google Software Product Sprint　　　　*Jul. 2020 - Aug. 2020*

- Collaborated with a team of peers to design and implement a web application using JavaScript, HTML, and CSS
- Implemented state-of-the-art GAN-based ML models in Python and deployed it at the back-end serving to the web application on which visitors can use to smoothly convert a piece of music into a new genre

WORK EXPERIENCE

Unity　　　　　　　　　　　　　　　　　　　　　　**Shanghai, China**

Software Engineer Intern　　　　　　　　　　　　　　　*Mar. 2021 – Sep.2021*

- Wrote code for PlasticHub in Go language, collaborated with a large team, and got familiar with industry developing tools like Git, Docker, and Postman
- Improved user experience by identifying inconsistencies and product flaws; proposed solutions to improve the workflow
- Designed test cases to comprehensively evaluate our program and wrote product description pages to introduce and promote our product

SKILLS

- **Computer Skills**: Python, Java, MATLAB, C/C++, Go, JavaScript, HTML, CSS, Final Cut Pro, Photoshop, Axure, Office
- **Languages**: Chinese (native), English (fluent) (**TOEFL iBT**: 111, **GRE**: 332)
- **Interests**: Photography, vlogging, volunteering, baking