

Hang Xie

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EDUCATION

University of Illinois at Urbana-Champaign (UIUC)

Aug 2021 – Dec 2022, expected

Master of Computer Science

Illinois, United States

Kean University - Wenzhou Campus (WKU)

Sept 2016 – June 2020

Bachelor of Science in Computer Science, Minor in Mathematics, GPA: 3.82/4.00 (top 2%)

Wenzhou, China

Honors: 2020 Provincial Outstanding Graduate (top 2%), 2019 & 2018 Provincial Government Scholarship (top 2%)

TECHNICAL PROFICIENCIES

Programming Languages Python, Java, SQL, HTML, CSS, JavaScript, C, R, Shell

Tools & Frameworks Django, Flask, Selenium, Snowflake, Amazon Aurora, Amazon RDS, MySQL, PostgreSQL, SpringBoot, MyBatis, Redis, Git, Postman, Swagger, Vue.js, Element UI, JMeter

PROFESSIONAL EXPERIENCE

Backend Engineer Intern | App Annie | Beijing, China

Aug 2020 – April 2021

- Implemented a log analyzer to track data sources and call stacks of 300 possible database queries for 40 endpoints in a 5,000,000-line Django codebase to facilitate a 5-membered squad to unify App Annie's petabyte-wise databases
- Migrated data sources of 15 Web APIs and Ajax from PostgreSQL and HBase to Snowflake; increased the overall API/Ajax efficiency by 50%, e.g., reducing the response time of App Summary API (60% of overall API traffic) from 4s to 2s
- Developed and maintained 20+ (50%) App Annie's customer APIs using Flask in Python; conducted unit test, functional test, robustness test, load test, and smoke test to ensure API qualities before releasing
- Initiated a testing architecture to automatically collect user-queried URLs from production and compared response results between refactored APIs and original ones to avoid data inconsistency, reducing estimated 1-week QA effort into 3 hours
- Collected missed 1-year, 1T log from AWS Cloud Watch, analyzed the lost log, and optimized the original cron job from 10mins to 45s with 25.8% less memory usage to generate daily customer API usage report for PMs to reduce churn rate
- Designed 3 data models in App Annie Query Language (AQL), an internal OLAP-based query system, allowing users to query desired metrics from different dimensions and reducing the processing time of data aggregation

Software Engineer Intern | New Hit Technology Co., Ltd. | Hangzhou, China

March 2020 – June 2020

- Created 30+ reliable RESTful APIs to manage the daily activities in the nursing house using SpringBoot and MyBatis in Java
- Conducted load test by JMeter to ensure API stability; scaled 10+ automated testing scripts by Selenium for regression
- Monitored system response time with New Relic; optimized slow SQL query performance from seconds to milliseconds by analyzing execution plan, creating applicable indexes, and sharding
- Developed 20+ front-end pages for user interaction and server-side data demonstration by Vue.js and Element UI

Research Intern | Center for Research Computing, University of Notre Dame | South Bend, USA

June 2019 – July 2019

- Published *Global News Sentiment Analysis* at the 2019 Computational Social Science annual conference held in Santa Fe, US
- Collected 10,000 news from 10 media outlets from Nexis Uni by Python; quantified and visualized bias by sentiment polarization
- Accelerated the overall news processing speed from 10 minutes to 2 minutes by multiprocessing; compared performance of 3 text processing (sentence, paragraph, and article-based) approaches and 4 sentiment analysis tools in the news area

FEATURED PROJECTS

Real-Time Cryptocurrency Data Spider | Self-Employed

April 2021 – June 2021

- Delivered an auto-config process to log into chrome extension MetaMask with customized network RPCs by Python and Selenium, allowing data crawler to access various decentralized blockchains
- Collected 3,600 metrics like annual percentage yield (APY) and total value locked (TVL) on 17 websites across 3 blockchains; optimized the crawling efficiency from 10 minutes to 1 minutes on a dual-core CPU server by multiprocessing
- Maintained 5 shell scripts to regularly release zombie processes and clear memory leaks, saving \$40 server cost every month
- Deployed the spider on AWS to retrieve data 24/7 and exported collected data from each website into excel to provide investment insight for 5 professional blockchain investors

SeeU – Online Short Video Sharing Platform | Undergraduate Senior Capstone

Feb 2020 – May 2020

- Initiated a WeChat mini program for WKU students to share their favorite moments, follow/unfollow friends, like/comment videos, add background music on their video clips, etc.; implemented the backend by SpringBoot and stored the data in MySQL
- Incorporated Redis to manage user login sessions and adopted FFMpeg with Java to edit and combine audio and video