

Tianyu Du

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EDUCATION

Santa Clara University

Master of Science in Computer Science and Engineering GPA: 3.94/4.00

Santa Clara, CA

Sep 2019 - Mar 2021

Minzu University of China

Bachelor of Engineering in Computer Science GPA: 3.21/4.00

Beijing, China

Sep 2010 - Jun 2014

RELEVANT COURSES

Analysis and Design of Algorithms, Operating System, Computer Architecture, Data Structures, Cloud Computing, Distributed System, Database Systems, Software Engineering, Computer Networks, Machine Learning

SKILLS

Programming Languages: Java, Python, C, C++, JavaScript, HTML, CSS

Technologies: Linux, Git, SQL, AWS(S3, Redshift, CloudFormation, IAM, EC2), Apache Kafka, Hadoop, HDFS, Load Balancing, RESTful API, Network Programming, Multi-threaded Programming, Agile Development

WORK EXPERIENCE

Amazon

Software Development Engineer Intern

Virtual Location, CA

Jun 2020 - Sep 2020

- Developed graphic and interactive dashboards to show App engagement data through Amazon QuickSight, providing visualizations for engineering team to validate service changes in weekly operational review
- Added 26 new metrics via executing SQL statements in a Python script to monitor the changes of engagement data on regular basis, enriching the data interpretation on the metadata collected in Redshift
- Designed a workflow to ensure the flexibility to easily expand the dashboards and built a pipeline to create Firehose Delivery Stream via a CloudFormation template, which was portable for future use
- Improved customer experience by categorizing different metrics, shortened data loading time via using QuickSight SPICE and minimizing the calculation on client side, and introduced proper filter controls to present interactive dashboards for data customizations on 5 criteria
- Migrated and backfilled the data to present the dashboards with continuous changes reflected properly
- Onboarded quickly to manage the project progress and finished the baseline project two weeks in advance
- Took high-level of ownership to have a good understanding of existing architecture and project goals
- Showed initiative to build an efficient communication to collaborate with the team during my virtual internship
- Won a full-time return offer for my performance, integrity and enthusiasm

Clarif FileMaker, an Apple subsidiary

Software Quality Assurance Engineer

Beijing, China

Jul 2014 - Sep 2019

- Created and executed test plans and test cases to deliver high quality products, covering 10+ features on 4 FileMaker products which powered the consistent behaviors for FileMaker developers and FileMaker users
- Expanded the library and test cases of a Python Selenium automation suite to execute basic checks for every new build as well as to regress specific bugs, which saved days of repeating manual effort each time
- Reproduced a critical customer issue in-house by analyzing the problematic scenarios, which influenced the Spanish language users of WebDirect, easing the escalation of customers complaints
- Exceeded the expected performance by contributing the greatest number of valid bugs in my team
- Maintained a close relationship with team members in China and US to ensure a fruitful collaboration
- Transferred testing strategies to improve work efficiency of new team members by writing up clear guides to cover regular functional checks as well as corner use cases

PROJECTS

Santa Clara University

Apr 2020 - Jun 2020

- **Cloud Load Balancer:** Optimized Power-of-Ten approach achieved shorter max processing time by 98%
- **Message Broker:** High available message queues with backup restoration and wildcard matching on topics
- **Distributed Pub/Sub System:** Scalable P2P overlay structure to disseminate messages in Gossip Protocol