Zhongcheng Xiao

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EDUCATION

Duke University   August 2017 - May 2019
Master of Science in Computer Science

University of North Carolina at Chapel Hill   August 2013 - May 2017
Bachelor of Science in Applied Mathematics, Second Major in Computer Science

<u>Relevant Coursework</u>: Artificial Intelligence, Operating Systems, Computer Vision, Graphics, Security and Cryptography, Digital Logic and Computer Architecture, Quantum Error Correction

EXPERIENCE

Genesys   Aug 2019 - Present
Software Engineer   *Durham, NC*
- Designed and implemented APIs in micro-services that index and distribute digital resources for the iot devices across the globe using AWS tools (S3, DynamoDB, ElastiCache, SQS etc) in Java, Kotlin, Clojure and Go; refactored endpoints to optimize query processing time
- Maintained the service stability and joined the on-call rotation for lower environments
- Refactored a lambda infrastructure that monitors the device status and expanded its ability to reset the inactive
- Inserted metric tracings throughout the code-base to facilitate the realtime diagnosis of services on the cloud
- Customized the build and deployment pipelines with Gradle, Docker, Jenkins and CloudFormation scripts

Google   May 2018 - Aug 2018
Software Engineer Intern   *Mountain View, CA*
- Analyzed datasets of frequently asked question-answer pairs collected from over two million web domains using the internal Map-Reduce framework in C++, visualized the key insights
- Implemented and demo-ed a google assistant dialogue feature that helps clarify user intents of ambiguous queries in C++, including the designs and implementations of data schema

The Fuqua School of Business   Aug 2017 - May 2018
Graduate Research Assistant   *Durham, NC*
- Web scraped annual reports for over 300 corporate firms in Python, maintained storage on a cloud file system
- Implemented algorithms to curate data, extract feature vectors and quantify corporate culture values for different orgs

Carolina Center for Interdisciplinary Applied Mathematics   Dec 2014 - Aug 2016
Undergrad Research Assistant   *Chapel Hill, NC*
- Modeled biological networks of the plant RNA abundance data over 20,000 genes in R, detected communities in Matlab to identify functional groups that eventually match the gene-ontology database with high confidence
- Improved networks classification accuracy on benchmark datasets by training random forests and kNN classifiers

SIDE PROJECTS

Sealife Tracking in Poor Lighting Environments, *Duke*   Aug 2018 - Dec 2018
- Searched scuba diving videos and pre-processed into a sequential-frame based dataset in Python and Matlab, examined keypoint feature trackers invariant to the object deformability in C++
- Incorporated a rotation proof schema for a popular DCF-based tracker and improved the tracking precision and durability

Is Capsule Better: Real Human Face Verification, *Duke*   Jan 2018 - May 2018
- Constructed an image dataset of 800 real and fake" human faces by randomly swapping facial features using OpenCV
- Trained the CNN and Capsule-Net to authenticate real faces using Keras, both achieving competitive results

Software Engineering on FPGA, *UNC*   Jan 2016 - Aug 2016
- Implemented a MIPS processor on FPGA in Verilog and C, developed a simplified Beatmania demo for this processor in assembly language x86
- Programmed a Zynq board to get real-time pixel stream from camera sensors residing on the board through an FMC card

Supervised Hacking Projects, *UNC*   Jan 2016 - May 2016
- Generated hashed mnemonic credentials to crack offline accounts in C, extracted web directories with SQL injection
- Intercepted data by hacking into the Bluetooth communication protocol, reverse engineered the Minesweeper game to secure a winning strategy in x86

SKILLS AND INTERESTS

Skills   Python, Java, C++, AWS, Redis, SQL/NoSQL, Kafka, MVC, Kotlin, Docker, git, Matlab

Interests   Automation, Vision, Dialogues, Storytelling, Privacy, Fairness, Performing Arts, VR, Cooking