Zhongcheng Xiao

lilxiao81@gmail.com ◇ 919-360-8657 ◇ Raleigh, NC

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

Relevant Coursework: Reinforcement Learning, Artificial Intelligence, Computer Vision, Graphics, Operating Systems, Digital Logic and Computer Architecture, Security, Quantum Error Correction

EXPERIENCE

Genesys Aug 2019 - Present
Software Engineer *Durham, NC*
- Refactored micro-services to store and distribute digital resources using JVM languages and the AWS sdks while maintaining the service stability; wrote a lambda application to monitor the device status using Python
- Inserted metric and tracing methods throughout the code-base to facilitate the debugging of large scale distributed systems
- Customized the test, build and deployment pipelines for the micro-services with the 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 tested a google assistant dialogue feature that helps clarify user intents of ambiguous queries in **C++**

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 Cloud
- Implemented algorithms to traverse and curate data across a large file system, extracted feature vectors using **nltk**
- Quantified corporate cultures with machine learning measures in **Scala**, visualized key insights

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, *The Image Processing Lab, Duke* Aug 2018 - Dec 2018
- Handpicked scuba diving videos online, converted into a sequential-frame based dataset in **Python**, pre-processed the dataset in **Matlab**, examined keypoint feature trackers invariant to the object deformability in **C++**
- Incorporated a rotation invariant schema for a popular **DCF**-based tracker and improved the tracking precision

Is Capsule Better: Real Human Face Verification, *The ECE Department, 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, *Department of Computer Science, 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, *Department of Computer Science, UNC* Jan 2016 - May 2016
- Generated hashed mnemonic credential candidates to crack offline accounts in **C**, extracted web directories with SQL injection
- Intercepted hidden information by hacking into wristbands in **Javascript** given the Bluetooth communication protocol, reverse engineered the Minesweeper game to secure a winning strategy **x86**

SKILLS AND INTERESTS

Skills Python, Java, C++, AWS, Redis, SQL/NoSQL, Kafka, Spring Boot, Jenkins, Docker, git, Matlab
Interests Automation, Vision, Dialogues, Privacy, Fairness, Performing Arts, VR, Cooking