Siqi Huang

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Objective: Intern as data scientist

Education

2016.1-2020.12(Expected)	**University of North Carolina at Charlotte (UNCC)**	Ph.D. Computer Engineering
2011.9-2015.7	**SUN YAT-SEN University (SYSU)**	B.E. Software Engineering
	• *Award: Software Engineering School Honored Student*	

Skills

◆ Familiar with **Data Mining** and **Machine Learning** theories and algorithms.

◆ Familiar with **Mobile Virtual Reality** and **Augmented Reality** application development.

◆ Proficient in **C++**, **Python**, familiar with Java, C#, and MySQL.

◆ Have basic knowledge about **Deep Learning** and **Computer Vision** algorithms and platforms, such as Tensorflow.

◆ Have basic knowledge about **Big Data** in **Spark** and **Hadoop**.

Research Experience

2017.10-2018.01 **Mobile AR application with Software Defined Network (**published two academic papers**)**

◆ Develop a AR application (object detection and recognition) on both Microsoft HoloLens and Samsung smartphone;

◆ Training a Convolutional Neural Network based model for the AR application;

◆ Connect the Mobile AR devices with the remote server via a wireless network designed with NS-3 and Mininet;

2016.10-2017.10 **Big data driven network optimization (**published three academic papers**)**

◆ Process a wireless network data set with Hadoop (approximately 2.8 billion records and 225 GB);

◆ Filter out conflict, redundant, and error records from the data set;

◆ Extract useful information (network features) from the data set;

◆ Design machine learning algorithms (Clustering and Artificial Neural Network) to analyze the pre-processed network data and optimize the network performance in terms of network management efficiency.

2016.10-2016.12 **Country level fragile state analysis**

◆ Collect the fragile state data set for 170 countries, and identity 18 contributing indicators, such as social, economic, political and military indicators.

◆ Design data mining algorithms (Apriori) to discover the relationships among the indicators and fragile state of each country;

◆ Design corresponding fragile state improvement strategies for each country based on the discovered association rules.

2016.05-2016.08 **Video delivery in SDR LTE platform**

◆ Build LTE network using GNU radio and OpenAirInterface (software platforms);

◆ Implement video delivery platform via USRP based LTE base station (embedded hardware).

2015.01-2015.07 **Moving Object Detection System in Multiple forms of Videos**

◆ Build a system to detect and tracking moving objects in regular video and infrared video.

2014.09-2014.11 **Image beauty application development** (Memory Book: Accepted by the Windows app store)

◆ Develop a windows application using C# and XAML;

◆ Implement the image beauty and processing algorithms in the App.

Selected Publications

1. Qiang Liu, **Siqi Huang**, Johnson Opadere, and Tao Han, "An Edge Network Orchestrator for Mobile Augmented Reality", in *IEEE International Conference on Computer Communications (INFOCOM)*, May 2018 (acceptance rate 19.2%).

2. **Siqi Huang**, Tao Han and Nirwan Ansari, "Data-Driven Network Optimization in Ultra-Dense Radio Access Networks," in *IEEE Globecom*, Dec. 2017.

3. Qiang Liu, **Siqi Huang (Co-first author)**, Yang Deng, Tao Han, "MExR: Mobile Edge Resource Management for Mixed Reality Applications," in *IEEE INFOCOM*, May 2017.

4. **Siqi Huang**, Tao Han and Nirwan Ansari, "Big-Data-Driven Network Partitioning for Ultra-Dense Radio Access Networks," in *IEEE International Conference on Communications (ICC)*, May 2017.