Scott Chase **Waggener**

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Education

The University of Texas at Dallas *Aug. 2018 - May 2020*

M.S. in Computer Science - 4.0 GPA

Collaborating with a research group to improve detection of micro-bubbles in ultrasound images using neural approaches. Worked with a faculty member to produce deep learning demonstrations using TensorFlow 2.0, Google Colab, and Docker.

The University of Texas at Austin *Aug. 2012 - Dec. 2015*

B.S. in Physics - 3.53 GPA

Modified the hardware and software implementation of a scanning tunneling microscope using LabVIEW to automate tip descent for the physics senior lab. Practiced the fundamentals of biomedical research through the freshman research initiative as part of a research group investigating supra-molecular sensors.

Technical Skills

Languages	Python, Java, Scala, C/C++
Operating Systems	Linux, BSD, MacOS, Windows 10
Tools	TensorFlow, PyTorch, Git, Unix Shell, Hadoop, Spark, SQL, NoSQL, HBase, Cassandra, Docker, AWS, Latex, CI/CD

Academic Projects

Super Resolution Sonography *Jan. 2020 - May 2020*

Super resolution sonography

Implemented vision models in PyTorch to localize sonography contrast agents. Supervised an undergraduate student who assisted with implementation.

Automatic Summarization *Oct. 2019 - Dec. 2019*

Extractive summarization with BERT and other architectures

Implemented multiple networks based on the BertSum architecture using PyTorch and Docker. Explored the use of Nvidia's Apex library to train float16 models in PyTorch.

Tiny ImageNet Demonstrations *May 2018 - Sep. 2018*

Student volunteer for faculty member

Developed scripts using Bash and Docker to downsample the ImageNet vision dataset to produce an alternate Tiny ImageNet. Implemented vision networks based on Resnet and Inception-Resnet in TensorFlow for dominant object classification.

Neural Stock Prediction *July 2018 - Aug. 2018*

Predicting future trends with deep learning

Implemented a preprocessing pipeline with Apache Spark and Scala to process daily stock histories for 8,000+ securities. Created a convolutional and transformer based neural architecture in TensorFlow 2.0 to predict future prices using a discretized classification approach.

Experience

Paladin Technologies, DBA. *Jan. 2014 - Aug. 2018*

Sole Proprietor

Provided information technology and design services on a contract basis. Responsibilities included: connecting with potential customers, planning an approach or design to address their problem, and executing that plan. Upgraded approximately 50 ATMs across South Texas for Action ATM to ensure EMV compliance.

Activities

Driscoll Children's Hospital Volunteer *Mar. 2016 - May 2017*

Private Pilot's Training & Certificate *Aug. 2010 - Aug 2011*