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

- Intelligent systems track.
- Collaborated 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 supramolecular sensors.

Technical Skills

Languages	Python, Java, Scala, C/C++
Operating Systems	Linux, BSD, MacOS, Windows 10
Tools	Tensorflow, Pytorch, SQL, Git, Hadoop, Spark, NoSQL, Docker, AWS, Latex

Experience

Cambria Adara Properties, LLC.

Nov. 2008 - Jan. 2014

Information Technology

Remotely administered computers, computer networks, and CCTV systems using SSH, VNC, and TeamViewer for multiple locations. Ensured compliance with payment card industry requirements using SSH, TeamViewer, and nmap.

Paladin Technologies, DBA.

Jan. 2014 - Aug. 2018

Sole Proprietor & Software Engineer

Planned and executed the upgrade of approximately 50 ATM machines for Action ATM to ensure EMV compliance. Designed and implemented IoT solutions using Python and C++ to be run on Raspberry Pi or ESP8266 systems.

Projects

Tiny ImageNet Demonstrations

Richardson, Texas

Student volunteer for UTD faculty

May. 2018 - Sep. 2018

- Developed scripts to produce a lower resolution version of ImageNet.
- Implemented vision networks based on Resnet and Inception-Resnet for dominant object classification.
- Achieved 53% top-1 validation accuracy in 24 hours of training using an Inception variant.

Neural Stock Prediction

Richardson, Texas

Predicting future trends with deep learning

May. 2018 - Aug. 2018

- Implemented a Tensorflow compatible preprocessing pipeline using Apache Spark capable of handling 8,000+ securities.
- Designed a convolutional encoder with an attention-based classification head to predict discretized future percent change.
- Achieved 51% overall top-1 validation accuracy, with ongoing work to examine accuracy over only high confidence predictions.

X-Ray Photography

Rockport, Texas

Low Cost Digital Radiographs

May. 2016 - Aug. 2018

- Designed an apparatus to capture high resolution digital radiographs using under $300 in X-ray equipment.
- Implemented an beam control system that included multiple redundant safety mechanisms.
- Automated the capture of radiographs using MQTT and Python to coordinate multiple pieces of hardware.
- Explored post-processing techniques to remove X-Ray induced noise from captured images.