

Scott Chase Waggener

MACHINE LEARNING · DATA SCIENCE · ARTIFICIAL INTELLIGENCE

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Education

University of Texas at Austin

B.S. IN PHYSICS - 3.53 GPA

Austin, Texas

Aug. 2012 - Dec. 2015

- **Physics** - classical mechanics, electro and thermodynamics, quantum mechanics
- **Mathematics** - multivariable and vector calculus, differential equations, linear algebra, statistics
- Participated in the design and testing of a scanning tunneling microscope for the physics senior lab.
- Additional courses in biology, genetics, organic chemistry, and biochemistry.

University of Texas at Dallas

M.S. IN COMPUTER SCIENCE - 4.0 GPA

Richardson, Texas

Aug. 2018 - Present

- Intelligent systems track.
- Coursework in machine learning, deep neural networks, database design, big data, algorithms, NLP, and operating systems.

Experience

Cambria Adara Properties, LLC.

INFORMATION TECHNOLOGY

San Antonio, Texas

Nov. 2008 - Jan. 2014

- Provided service to several night clubs throughout the state of Texas.
- Maintained CCTV systems and local area networks.
- Remotely managed company computers through SSH, VNC and TeamViewer.
- Ensured compliance with payment card industry requirements.

Paladin Technologies, DBA.

SOLE PROPRIETOR & SOFTWARE ENGINEER

Rockport, Texas

Jan. 2014 - Aug. 2018

- Provided information technology services to Cambria Adara Properties, LLC. as an independent contractor.
- Upgraded ATM machine hardware and software at approximately 50 locations to ensure EMV compliance.
- Prototyped a centralized smart home control system based on the Raspberry Pi for a client overseas.
- Created circuit board designs using CAD software.
- Designed an open source digital signage solution for the Raspberry Pi.
- Developed firmware in C/C++ for the Espressif ESP8266 and ESP32.

Skills

Python, Tensorflow, C/C++, Java, Scala, Linux/BSD, SQL, Latex, AWS, Docker, Git, Hadoop, Spark, NoSQL

Projects

Tiny ImageNet Demonstrations 📄

STUDENT VOLUNTEER FOR UTD FACULTY

Richardson, Texas

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 📄

PREDICTING FUTURE TRENDS WITH DEEP LEARNING

Richardson, Texas

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 📄

LOW COST DIGITAL RADIOGRAPHS

Rockport, Texas

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.