Kyle Roth

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EDUCATION

Brigham Young University — **Provo, UT**

B.S., Applied and Computational Mathematics Emphasis (3.9 GPA) — *Dec 2019*

- Minor in computer science; emphasis in linguistics
- Relevant coursework: optimization, deep learning, analysis, algorithm design, data structures, computer systems, model uncertainty and data, dynamics and control

EXPERIENCE

Emergent Trading — **Chicago, IL**

Intern — *May 2019 - Aug 2019*

- Built an interactive tool to observe movement in Brazilian currency futures using the Bokeh Python library
- Wrote fast and extensible analysis code in C++ to track competitor's responses to market conditions in the Chicago Mercantile Exchange

CamachoLab, Brigham Young University — **Provo, UT**

Research assistant — *Jan 2019 - current*

- Simulated field profiles of photonic chip components using neural networks with resize convolutions
- Built SLURM_gen, a tool to automatically generate and manage simulated datasets in a high-performance computing environment

Cobalt Speech and Language — **Provo, UT**

Modeling Intern — *Apr 2018 - Nov 2018*

- Improved accuracy of a neural network model for autonomous drone recognition of air traffic control speech from 24% to 6% error, using class-based (Thrax) language models
- Wrote Go scripts to validate and generate spec files for a natural language understanding engine

PROJECTS

Speech2phone - *senior group project* — *Aug 2018 - May 2019*

- Achieved 76% accuracy on phoneme classification of the TIMIT corpus
- Created data caching mechanism for easy dataset access

Custom deep learning setup - *personal project* — *Mar 2019 - current*

- Installed GPU-enabled TensorFlow and PyTorch with custom Anaconda environments and IPython kernels
- Hosted JupyterHub environment for multiple users on personal computer
- Specified custom MFA authentication requirements for remote access over SSH

AWARDS AND ACHIEVEMENTS