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 a deconvolutional neural network
- Built SLURM_gen, a tool for generating and managing simulation 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.

***SLURM_gen** - open source tool*   *May 2019 - current*

- Wrote a Python tool for organizing datasets generated on a SLURM high-performance computing environment.
- Wrote functionality to automatically submit SLURM jobs to produce the desired dataset samples, based on experimental data from past runs.

AWARDS AND ACHIEVEMENTS