DANIEL RICKS

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EDUCATION

Master of Science in Computer Science, Machine Learning *Aug 2015 - Dec 2018*
Brigham Young University, GPA: 3.75

- Deep Learning Theory & Practice: Implemented deep neural networks, GANs, RNNs, etc.
- Machine Learning & Data Mining: Captured raw motion data from participants and analyzed using Weka.
- Natural Language Processing: Cleaned raw elephant audio data and classified using neural networks.

TECHNICAL SKILLS

Computer Languages	Python (Tensorflow & PyTorch), JavaScript, C#, Java
Software & Tools	Bash, Git, Vim, AWS, Docker, Weka, LaTeX, SQL, MS Office

WORK EXPERIENCE

Edquity, Inc. - *Machine Learning Consultant* *Jan 2019 - Present*

- Weighed pros and cons of implementing a machine learning approach vs. a rule-based system. Decided on a simple solution that met needs and fit the goals of the company.

Amazon Alexa Prize EVE Team - *Deep Learning Researcher* *Jan 2018 - Nov 2018*

- Designed and implemented a chatbot for Amazon's Alexa Prize Competition in 2018 (chosen from hundreds of applicants, with $250k funding). Used Python and AWS services.
- Made architectural decisions that improved response relevance by 15%, and reduced code by over 200%.

Perception, Control, and Cognition Lab - *Deep Learning Researcher* *Jan 2016 - Dec 2018*

- Published four papers, most about novel uses of high-dimensional embedding spaces for knowledge extraction from text. Notable conferences include IJCAI, and NeurIPS and AAAI workshops.
- Engineered a learning environment for text-based games, which was cited by Microsoft's TextWorld.
- Served on workshop committees for NeurIPS and AAAI workshops in 2018 and 2019, respectively.
- Assisted team members in various bug fixes, architectural discussions which led to a highly effective and collaborative working environment

Natural Language Processing Lab - *Researcher* *May 2014 - Dec 2015*

- Constructed an automated pipeline to digitize historical documents, reducing the required time by over 75%. Used Bash, Python, Java, Indri, Tesseract OCR, OmniPage Pro, Abbyy FineReader, and the Machine Learning for Language Toolkit.

Center for E-Design - *Researcher* *April 2013 - May 2014*

- Helped implement a multi-user computer-aided design system for Boeing (Patent #20150120252, CAx Model Synchronization). Used C# and Siemens NX.

ACHIEVEMENTS

- 5th place in the 2018 Amazon Alexa Prize Competition
- Won the IEEE CIG Text-Based Adventure AI Competition in 2017 with Carl, an agent which utilizes state space disambiguation.
- Won the IEEE CIG Text-Based Adventure AI Competition in 2016 with Dug, an agent which measures manipulability and retrieves appropriate affordances using word2vec.

More information available at: danielricks.github.io