Lisa Fan

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EDUCATION

Northeastern University, Boston, MA
Master of Science in Computer Science *Aug 2019*
Concentration: Natural Language Processing

Tufts University, Medford, MA
Master of Science in Computer Science *May 2017*
Bachelor of Science in Computer Science *May 2016*
GPA: 3.87/4.0, *summa cum laude*, Phi Beta Kappa
Studied abroad: Computer Science courses at University College London *Sep 2014 - May 2015*

RELEVANT COURSEWORK

Natural Language Processing, Deep Learning, Deep Learning for Computer Vision, Artificial Intelligence, Human Robot Interaction, Statistical Pattern Recognition, Machine Learning, Experimental Methods in CS

RELEVANT SKILLS

Programming: *Skilled in* Python, Tensorflow, PyTorch, Linux, JavaScript, jQuery, HTML5, CSS, C++, C
Experience with Java, Ruby, SQL, R, PHP
Training: Collaborative Institutional Training Initiative (CITI Program) certified in Social & Behavioral Research
Languages: Native speaker in English and Japanese; Intermediate proficiency in Mandarin Chinese

RESEARCH EXPERIENCE

Quantifying and Detecting Political Bias in News Boston, MA
Northeastern University, Natural Language Processing Lab *Sep 2018 - Aug 2019*

- Devised a news bias categorization schema and developed an HTML and Javascript annotation tool
- Lead weekly sessions for a team of three researchers to compare and resolve differences in annotations
- Annotated a dataset of 300 topic-aligned articles from New York Times, FOX News, and Huffington Post
- Benchmarked new dataset for automatic bias detection using a pre-trained neural language model (BERT)
- Published a short paper in 2019 Empirical Methods in Natural Language Processing

Improving Semantic Understanding of Automatic Text Summarization Boston, MA
Northeastern University, Natural Language Processing Lab *Sep 2017 - Sep 2018*

- Designed and implemented a multi-task learning neural abstractive summarization network in Tensorflow
- Formulated framework for a novel adversarial evaluation scheme using Python
- Trained numerous variations of model using Graphics Processing Units (GPUs) on Amazon Web Services
- Yielded better results than state-of-the-art summarizers based on automatic and human model evaluations
- Presented at 2018 NeurIPS Workshop on Interpretability and Robustness in Audio, Speech, and Language

Human Perceptions of Emotional Intelligence in Robots Medford, MA
Tufts University, Human Robot Interaction Lab *Sep 2016 - May 2017*

- Wrote, filmed, and edited scenarios using live actors and robots
- Created web survey infrastructure to show video then ask questions using HTML, Javascript, and PHP
- Administered study to ~400 crowdsourced participants on Amazon Mechanical Turk, analyzed results using R
- Nominated for Best Paper Award at 2017 International Conference on Intelligent Virtual Agents

Research Experience Continued

Generating Photorealistic Images from Hand-Drawn Sketches — Medford, MA
Tufts University — *Feb 2017 - May 2017*

- Used a generative adversarial network (GAN) and composed a novel mathematical objective function to reverse engineer photos from crudely drawn human sketches
- Outperformed a state-of-the-art GAN on newly designed and adapted existing evaluation metrics
- Produced as result artistic interpretations of sketches: https://lisa.fan/images/sketchgan_examples.png

Related Work Experience

Tufts University — Medford, MA
Teaching Assistant — *May 2015 - Dec 2016*

Intro to Computer Science - Introductory class of 150 students *(Summer, Fall 2015)*
Natural Language Processing - Graduate level class of 30 students *(Spring, Fall 2016)*

- Held review sessions before exams and guided individual students on assignments during office hours
- Corresponded daily with students and answered their questions via Piazza web forum
- Evaluated student performance by grading assignments and exams

Ditto Labs — Cambridge, MA
Software Engineer, Summer Intern — *June 2016 - Aug 2016*

- Created infrastructure to crowdsource training data for image classifiers using Amazon Mechanical Turk
- Improved dataset creation by using natural language processing on tweets to find relevant images

The MITRE Corporation — Bedford, MA
Software Engineer, Summer Intern — *June 2014 - Aug 2014*

- Collaborated with a team of 8 interns to engineer a series of intercommunicating control elements
- Programmed desktop and mobile clients using Java and JavaScript to display situational awareness data
- Successfully completed mock run of Air Force mission, relaying to and receiving flight data from Air Force operators

Leadership & Service

Women in Computer Science, Tufts University — Medford, MA
Secretary — *Jan 2014 - May 2014*

- Revitalized club mission and constitution with other executive board members
- Scheduled and documented conversations at executive board meetings
- Organized workshops, seminars, and social events including fundraiser and mock interviews

Asian Women's Christian Association — Teaneck, NJ
Teacher — *July 2013*

- Taught a one-month course for SAT I Reading & Writing to a group of 15 low-income students
- Prepared lesson plans, graded homework and practice tests, mentored students

Interests

Film (watched new movie every day for a year), Needle felting (crafting small figurines), Traveling (33 countries), Playing the theremin (electromagnetic musical instrument), Scuba diving (PADI Advanced Open Water certified)