Akshita Bhagia

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Machine Learning, Deep Learning, Natural Language Processing

Education

- **University of Massachusetts, Amherst** — Amherst, MA
  Master of Science in Computer Science; GPA: 4.00/4.00 — *Sep 2018 – May 2020*
- **Dhirubhai Ambani Institute of Information and Communication Technology** — Gandhinagar, India
  Bachelor of Technology in Information and Communication Technology; GPA: 8.95/10 — *Jul 2011 – May 2015*

Relevant courses

Machine Learning, Neural Networks, Deep Learning for NLP, Systems for Data Science, Advanced Algorithms

Experience

- **Cerebellum Capital** — San Francisco, CA
  Machine Learning Intern — *May 2019 - Aug 2019*
  - Adapted state-of-the-art deep learning models for financial time-series forecasting using Keras and Tensorflow.

- **InFoCusp** — Ahmedabad, India
  Lead Platform Development Engineer — *Feb 2018 - Jun 2018*
  Research Programmer — *Jul 2015 - Jan 2018*

  Graphical Research and Computing Environment
  - Engineered the core infrastructure of a data science platform used for R&D as well as production of financial models.
  - Added multi-language support (Python, Matlab, R, Julia, Markup) for defining computations.
  - Implemented a parallel execution architecture for processing data-flow chains with complex inter-dependencies.

  Figitizer
  - Mentored an intern on a project to create editable flowcharts from flowchart images using machine learning.

Skills

Python, Pytorch, scikit-learn, Keras, Tensorflow, spaCy, Git, HTML, JavaScript, C++, Mongo, MySQL, Java

Selected projects

- **Interpreting detection of style information in neural models** — Jan 20 - Present
  Advised by: Prof. Mohit Iyyer

  Working on interpretability of detection of stylistic information by neural models in fictional text.
- **Answering questions about Roman art history** — Sep 19 - Present
  Advised by: Prof. Mohit Iyyer, Prof. Eric Poehler

  Working on automated dataset construction and interface to explore art and architecture of Pompeii (ancient Roman city) using NLP and CV techniques.
- **Improving crowd-sourced annotations in biomedical text (Scripps Research)** — Jan 19 - May 19
  Advised by: Prof. Andrew McCallum, Dr. Andrew Su (Scripps Research)

  Used Markov chain Monte Carlo methods to improve crowd-sourced annotations for disease and phenotype identification in bio-medical text, by modeling the bias of annotators and true labels of entities, improving NER F1-score by 8 points.
- **Neural Machine Translation using Structural Linguistic Information** — Jan 19 - May 19

  Implemented a Transformer model for German-English translation. Achieved an improvement of 1.4 BLEU score by augmenting the transformer with linguistic information (BLEU - 28.8).
- **Image classification of protein samples** — Sep 18 - Dec 18

  Built models for a multi-class, multi-label classification task to identify mixed patterns of proteins using ResNets. Accepted to the ACM Student Research Competition at Grace Hopper Conference 2019.

Positions of responsibility

- Master's chair for CSWomen UMass; responsible for handling monthly travel grants (Feb 2019 - Present).
- Grader for Programming with Data Structures (Fall 2018), Neural Networks (Fall 2019).

Awards and achievements

- Recipient of the AnitaB.org Grace Hopper Conference Scholarship 2019.