

# Akshita Bhagia

<https://akshitab.github.io>

Machine Learning, Deep Learning, Natural Language Processing

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## EDUCATION

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- **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

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

## EXPERIENCE

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- **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

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

## SELECTED PROJECTS

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- **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 - Mar 20  
*Advised by: Prof. Mohit Iyyer, Prof. Eric Poehler*  
Worked 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

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- 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

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