

# Puran Zhang

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## RELEVANT EXPERIENCE

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**Temporal word embeddings** - Quantifying changes of words' meanings in politics MAY 2017- PRESENT

- Built a *Dynamic Bernoulli Embeddings* model, a distributed representations of words that drift over time, of political comments on Facebook with *TensorFlow*.
- Applied aggregations on comments data in our MongoDB database.

**Data Visualization, Cornell University** JAN - MAY 2017

- **"Rabbling"** - Babies' vocabulary development
  - Originator of the project, and implemented linear regression from *wordbank* and the visuals.
- **The Century of Movies** - Dynamics of movies in 1916 - 2016
  - Massaged the IMDb data, and implemented the HTML framework and JavaScript functions with *D3.js*.

**MPS Project - "Keep talking or explodes", Cornell University** AUG - DEC 2016

- Led the team and implemented a real-time web-based *messaging app* with Node.js and Socket.io, which allows researchers to modify features such as "is typing" indicators.
- Designed the user interface of the messaging app with HTML5/CSS3.
- Modified the C# core code of the game *ktane*, which allows researchers to generate customized bomb for studies.

**Natural Language Processing, Cornell University** AUG - DEC 2016

- **Question Answering System**
  - Integrated logistic regression model that trained and extracted candidate answers with Python.
- **Word Embedding in Topic Classification**
  - Trained word clusters with *gensim*, by applying mini-batch k-means algorithm on a google news word2vec model.

**Online RPG game**, A database integration project APR - AUG 2016

- Co-designed the game (balancing and pacing) and structure of implementations.
- Implemented login/register page (check mal-input and interact with back-end database with PHP).
- Built partial battle page/functions with PHP and AJAX (mainly Item system of characters).

## EDUCATION

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**Cornell University, Ithaca, NY** MAY 2017  
Master (MPS), Information Science GPA: 3.65/4.00

**University of Richmond, Richmond, VA** AUG 2012 - MAY 2016  
B.S., Mathematics & B.S., Psychology, Minor in Computer Science Cum Laude, Mathematics GPA: 3.92

*Relevant coursework:* Machine Learning • Data-driven Web Applications • Computer Graphics • Natural Language Processing • Database System • Algorithms • Operations Research • Numerical Analysis • Abstract Algebra

## SKILLS

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Java, Python, JavaScript, D3.js, SQL, ~~TEX~~TEX, MATLAB, git, Sketch

*\*Highlighted texts point to associated pages and files.*