

SHENGNAN CAO

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SUMMARY

Innovative software engineer interested in full stack web application development, and data engineer positions.

COMPUTER SKILLS

- **Languages:** Extensive experience in Javascript, Python, HTML5, CSS3; experience in R, Java, Solidity, Scala
- **Knowledge:** Full stack web development, mobile development(iOS, Android), machine learning (NLP), data mining, databases
- **Tools:** Node.js, ExpressJS, React, MongoDB, NLTK, SK-learn, React-Native, React-Redux, [socket.io](#), AWS Elastic Beanstalk, Heroku, DigitalOcean

PROFESSIONAL EXPERIENCE

MIT CAD lab

Cambridge, MA
Sep. 2018 – Feb. 2019

- *Research Assistant*
- Web development
 - Designed and coded a two-side user web platform (www.researchrev.org) and social networking web app (<https://morning-waters-23416.herokuapp.com>) from sketch using Node.js, ExpressJS, React, MongoDB
 - Implemented RESTful APIs, structured navigation and architecture, built core features including authentic system, file uploader, community, like- and view-counter
 - Collaborated with UX/UI designer to design frameworks and implemented front-end with React and Redux, deployed the web app on DigitalOcean and Heroku
 - Built a photo display mobile app with the help of React-Native, Flickr API
- Data mining
 - Wrote web crawlers to mine and stream massive data from open source forums using Python scripts in order to analyze relationship patterns

L.L.Bean

Boston, MA
March 2018 – June 2018

- *Machine Learning Internship*
- Performed cleaning and stemming over 8000 text data with nltk library
- Classified top 20 positive and negative words based on ratings and coefficients using WordCloud and Count Vectorizer
- Implemented Naive Bayes and Logistic Regression using TF-IDF plus ngram to predict review's context giving 85% accuracy rate
- Predicted summary using deep learning algorithms including RNN, LSTM, and seq2seq model with the help of Keras and Tensorflow

Divinity Studio Corp

Boston, MA
Summer 2018

- *co-founder/ web developer*
- Designed and coded AI Chatbot Web app (<https://ai-chatbot-application.herokuapp.com>) with Node.js, socket.io, deployed the app on heroku

PUBLICATIONS

- Z. Li, **Shengnan Cao**, et al, Understanding inbound and outbound knowledge flow in open source hardware companies using community network analysis, Proceeding under review IDETC/ICE, ASME 2019

EDUCATION

Northeastern University

Boston, MA
July 2018

MS in Informatics

GPA: 3.87 / 4.0

Courses: Algorithms, Database Management Systems, Programming Foundations for Digital Media in Java, Computer systems and Networks

China Women's University

Beijing, China
June 2015

BS in Finance