Congzheng Song

400 Dowman Dr, Emory University
Atlanta, GA, 30322

Mobile: 678-882-8741
Email: *csong27@outlook.com*

Education

- **Emory University**
  Atlanta, GA
  Honor Program in Math & Computer Science Department
  Aug. 2012 – Present
  - Major: *Bachelor of Science* in Computer Science
  - Second Major: *Bachelor of Arts* in Mathematics
  - Overall GPA: *3.957*

Research and Work Experience

- **Research on Mining Anomaly Behaviors During Epidemic Outbreak**
  Jan. 2015 – Present
  Advised by Prof. Ymir Vigfusson (Emory University)
  Atlanta, GA
  - In this project, we aims to detect people's anomaly behaviors during Icelandic epidemic using mobile phone data and develop a model that can predict epidemic outbreak in the future.
  - I analyzed mobile data in details and found signals that could tell the difference between normal days and anomaly days for people, which all could be used as features in predicting epidemic outbreak.

- **Research on Deep Learning for Survival Analysis**
  Aug. 2015 – Present
  Advised by Prof. Lee Cooper (Emory University)
  Atlanta, GA
  - Our project uses deep learning techniques in survival analysis based on cox regression model.
  - I implemented a neural network baseline algorithm using discretized time model on survival analysis for the project. Also, I collaborated with a graduate student and implemented deep stacked auto-encoder network especially for survival analysis using Theano in python.

- **Summer Research Intern at UCI**
  Jun. 2015 – Aug. 2015
  Advised by Prof. Sharad Mehrotra (University of California, Irvine)
  Irvine, CA
  - This summer project provides an interface for developers to interact with semantic concepts derived from sensors. It can execute queries over existing (and future) sensors by abstracting their capabilities and data for context-sensitive applications.
  - I designed and developed a web framework for collecting, querying and visualizing sensor data by user's request.
  - I also involved in implementing backend modules to handle user's request for processing and collecting sensors' data on multiple platforms.

- **Research Fellowship at Institute for Quantitative Theory and Methods**
  Aug. 2014 – Jan. 2015
  Advised by Prof. Clifford Carrubba (Emory University)
  Atlanta, GA
  - This project aims to mine legislative behavior and analyze roll call vote.
  - I developed a program that extracts and preprocesses the voting data from Mexican governmental documents in raw text format.

- **Undergraduate Chemistry Lab Teaching Assistant**
  Aug. 2013 – Jan. 2014
  Advised by Prof. Karl Hagen (Emory University)
  Atlanta, GA
  - I served as a teaching assistant to help students with problems they occurred during the lab, and teach students the basic rules and techniques for chemistry lab.

Honors & Awards

- Math & CS Department Dean's List
  2012-2015
- The Deborah Jackson Award of Math & CS Department
  2015

Congzheng Song

csong27@outlook.com

Student Poster

- **Mobile phone activity and population movement during an influenza A(H1N1) outbreak in Iceland.**.
  *Reinertsen E, Palmius N, **Song C**, Danon L, Saemundsdottir G, Magnusson O, Vigfusson Y, Clifford GD*.
  Sleep and Circadian Neuroscience Summer Schools, Poster. University of Oxford, Oxford, UK. 2015.

Coursework

- **Computer Science:** Artificial Intelligence, Data Mining, Natural Language Processing, Discrete Structures, Computer Organization and Architecture, Data Structures and Algorithms, Systems Programming, Computer Security
- **Mathematics:** Probability and Statistics, Optimization Theory, Partial Differential Equations, Multivariable Calculus, Differential Equations, Linear Algebra, Foundations of Mathematics

Course Projects

- **Deep Learning on Cell's Image Classification** *Jan. 2015 – May. 2015*
  Applied deep learning to cancer cells' image classification *Data Mining*
- **Text Classification using N-gram Neural Networks** *Aug. 2015 – Dec. 2015*
  Developing a novel deep learning models to text classification *Natural Language Processing*

Technical and Professional Skills

- **Programming Language:** C, Java, JavaScript, Python, HTML & CSS, SQL
- **Tools:** LaTeX, Theano, NodeJS, MongoDB, PostgreSQL, Jade, Matlab, Unix/Linux
- **Language Skill:** Chinese, Japanese

Extracurricular Activities

- **Public Relation & Media Director** *Sep. 2013 – Aug. 2015*
  Emory Undergraduate Math & Computer Science Major Association *Atlanta, GA*
  - Host events for Math and CS major students such as lectures and career advice.
  - Advertise through network, design flyers.

- **Student Volunteer** *Sep. 2012 – Jan. 2013*
  MedShare International *Atlanta, GA*
  - Categorize and recycle medical equipment.
  - Wrap and box the medical equipment so as to be sent to countries that need it.