SIYANG (ANNA) LIU

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EDUCATION

University of Illinois at Urbana-Champaign, Champaign, IL *Expected Graduation date: May 2019*
BS/Master of Computer Science *Current GPA: 3.83/4.0*

- James Scholar (Fall 2016, Spring 2017, Fall 2017)
- Dean's List (Spring 2017)
- Relevant Coursework:

Data Structure	Data Mining	Artificial Intelligence
Algorithms	Computer Networks	Natural Language Processing
Databases	Web Programming	Applied Machine Learning

WORK EXPERIENCE

Beijing Mapbar Science and Technology Co., Ltd *Beijing, China*
iOS Developer *06/2016 – 07/2016*

- Engaged in the front-end development incorporating WeChat into automobile dashboard by programming in Objective-C and applying WeChat APIs
- This feature has been deployed into production

Product Marketing Researcher *06/2015 – 07/2015*

- Summarized and analyzed marketing data for voice activated mapping products
- Performed market research on competing products, including collecting functionalities and performance of leading mapping products on the market and comparing with Mapbar products
- Communicated limitations of Mapbar's products to the product manager

PROGRAMS & PROJECTS

The Game of Breakthrough – *AI Program* *November 2017*

- Designed and implemented the core objects and data structures for a Breakthrough board game application from scratch
- Implemented agents with **minimax search algorithm** with a search tree of depth 3 and the **alpha-beta pruning search algorithm** with a deeper search tree
- Designed several **offensive/defensive heuristics** and be able to beat the TA agent with over 90% winning rate

Hidden Markov Model Part of Speech Tagger – *NLP Program* *October 2017*

- Trained a **Hidden Markov Model (HMM)** on corpus with part of speech tags
- Smoothed the transition probabilities of HMM using **Laplace smoothing**
- Predicted the most likely part of speech tags for words in untagged corpus using **Viterbi algorithm**
- Evaluated the tagger by comparing the predicted tags with the gold tags and generate confusion matrix
- Achieved 94% token accuracy, 88% sentence accuracy, 89% average precision and 94% average recall for each tag

Yelp+ : Java Web Service Development – Restaurant Search and Recommendation *August 2017*

- Developed a dynamic web application for users to search restaurants and update preferences
- Improved personalized restaurant recommendation based on search history and favorite records
- Created Java servlets with **RESTful APIs** to handle HTTP requests and responses
- Built **relational database(MySQL)** to capture real restaurant data from Yelp API
- Designed algorithms (e.g., **content-based recommendation**) to implement restaurant recommendation
- Designed an interactive web page utilizing **HTML, CSS** and **JavaScript**

Unicast Routing – *C Program* *April 2017*

- Developed a traditional shortest path routing with the **link state protocol**
- Implemented the **Dijkstra algorithm** and maintained a correct forwarding table
- Be able to react to changes in topology (changes in cost and connectivity) and converge within 5 seconds
- Applied **multi-threading** to continuously update the topology of the network

The Shell – *C Program* *February 2016*

- Implemented a text editor that reads and runs the commands and remembers all history commands

SKILLS

- Programming Languages: Java, Python, C/C++, Objective-C, HTML5, CSS, JavaScript, Haskell
- Angular.js, React, React Native, Git, SVN