MINGJIE CHEN

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EDUCATION

University of California, Berkeley, *Berkeley, U.S.* Aug. 2019 – Dec. 2019
Visiting Student, Fall 2019
Northeastern University, *Shenyang, China* Sept. 2017 - Present
Bachelor's Degree in software engineering (International, English) (Expected in July. 2021)
GPA: 3.926 (89.26/100)
GRE: 326 + 3.5 (V: 160, Q: 166) Aug 2020
TOEFL 103/120 (R: 30, L: 25, S: 23, W: 25) **Best Score**: 106/120 (R: 30, L: 28, S: 23, W: 25) July 2020
JLPT N3 Dec. 2018

SKILLS & INTERESTS

Technical Skills: Java (Spring, Spring Boot, Spring Cloud, SSM), JavaWeb (Vue, HTML, CSS, JavaScript, jQuery, etc.), Python, Lisp (Scheme), SQL, PyTorch, TensorFlow, C, C++.
Interested in Software Engineering and Development, Computer Vision, NLP.

REWARDS & HONORS

- Finalist Award of Mathematical Contest in Modeling (MCM/ICM) (Top 1%) April 2020
- Outstanding Student of Northeastern University (Top 3%) Nov. 2019
- Provincial First Prize of National College Students Mathematical Modeling Competition Oct. 2019
- Second Prize of Northeastern University Mathematical Modeling Competition Aug. 2019
- Second Prize of the National College English Contest May. 2019 & May. 2018
- Provincial Third Prize of 'LanQiao' Cup Algorithm Competition March. 2019
- National Scholarship (Top 1%) Nov. 2018
- First-class Scholarship (Top 2%) Nov. 2018
- Outstanding Students Pacesetter of Northeastern University (Top 1%) Oct. 2018

RESEARCH & PROJECTS

- **Cross-border E-commerce Borrow-sell Platform** June. 2020 – July. 2020

Developer, NeuSoft, (Front-end Code)(Back-end Code)
- Description: This Cross-border E-commerce Borrow-sell Platform Back-stage Management System aims at developing a system that is easy to use for users (manufactures with companies and brands, stores, buyers and administrators) to manage their back-stage data in the cross-border e-commerce platform.
- Responsibility: I was responsible for building and constructing both the front-end and the back-end part of manufacturer information management, user information management and store information management. I used Vue, Vuex, Axios, etc. as my front-end core techniques, and used SSM/Spring Boot and Spring Cloud, etc. as my backend frame, MyBatis as my ORM framework and Redis as our distributed cache.

- **CS61B Course Projects in Java** (Code) Sept. 2019 – Dec. 2019

Developer, University of California, Berkeley. (CS61B)
Proj0 Signpost: Finished the puzzle game Signpost with MVC pattern.
Proj1 The Enigma: Stimulated the Enigma machine that Germany used in World War II for encryption.
Proj2 Tablut: Established a chess game and required us to build a simple AI using Game Tree and α-β Pruning.
Proj3 Gitlet: Stimulated a version control system: Git.

- **Vehicle Motion Generation** Sept. 2019 – Nov. 2019

Research Assistant, University of California, Berkeley, MSC Laboratory (MSC Lab)
Advised by Prof. Masayoshi Tomizuka and Ph.D. candidate Liting Sun.
- Description: Using Imitation Learning and Reinforce Learning techniques to predict and simulate vehicles driving behaviors on roads with the data collected by MSC Lab.
- Responsibility: I was responsible for reproducing the paper: ChauffeurNet: Learning to Drive by Imitating the Best and Synthesizing the Worst, and Using Generative Adversarial Imitation Learning (GAIL) to simulate vehicles driving behaviors.

- **Computer Vision for Plant Phenotyping of Maize Plants** July 2019 – Sept. 2019

Research Assistant, North Carolina State University, ARoS Laboratory (ARoS Lab)
Advised by Prof. Edgar Lobaton and Ph.D. candidate Nathan Starliper.
Description: Using computer vision and image processing techniques to perform full plant phenotyping of maize plants for the purpose of monitoring crop health, growth stage, and water stress.
Responsibilities: I was responsible for implementing deep learning techniques for extracting the leaf tips and collars of the plants from the images. These will then be used to determine various geometric/topological properties of the plants that can provide insight into the health of the plant.
The future work aims at combining with 3D images or doing skeleton detection work, etc.

- **Legal Judgement Prediction** Feb. 2019 – July 2019

Researcher, Northeastern University
Advised by Prof. Guibing Guo (Guibing Guo)
- Description: This intelligent law judgment system aims to predict the charges and terms of penalty based on the crime fact descriptions data and related law articles.
- Responsibilities: I was at first responsible for implementng an encoder-decoder model and tried different encoders/decoders such as SVM (multiples times for related articles), CNN (to extract features), LSTM (make prediction). Then my further work was about adapting self-attention and Transformer model.

- **Music Analyze and Recommend Project using Clustering** Mar. 2019 – June 2019

Developer, Carnegie Mellon University
Tutor: Prof. Pradeep Ravikumar (Pradeep Ravikumar)
- Description: It was an individual project aimed to utilize the audio feature clustering extracted from raw audio files (mp3s) and build a simple song recommender that suggests new tracks based on user preferences and inputs.
- Responsibilities: I first did clustering (K-means, Hierarchical Clustering, DBSCAN) on the Free Music Archive (FMA) dataset and subsequently built a recommender system using CF, contend-based recommendation, user-based recommendation to recommend songs that are new and attractive to the users.

- **Animal Image Detection and Classification System** Dec. 2018 – Feb. 2019

Developer and Team Leader, Institute of Automation, Chinese Academy of Sciences
Advised by Prof. Shuangshuang Li
- Description: This is an animal detection and classification system based on CNN, it could detect and classify animal types when an animal image is input to the system.
- Responsibilities: I was responsible for leading the team and planning for task assignments as well as coding. We implemented an animal detection and classification system based on CNN. First, I used python web crawler to collect animal pictures as our dataset, then I implemented a CNN model of 4 hidden layers with 2 fully connected layers and two Max Pooling layers. Finally, we used SoftMax function to output multiple classification results.
Patent:
An animal image search system based on convolutional neural network April 4th 2019
Patent number: 2019100354, Australian Innovation Patent, Valid for 8 years.

EXTRACURRICULAR ACTIVITIES

- Class Vice-Monitor Sept. 2018 – Present
- Undersecretary of Student Psychology Club June. 2018 – Jun 2019
- Volunteer at Liaoning Science and Technology Museum Nov. 2018
- Commissary of Mentality in class Sept. 2017 – Aug.2018

OTHER-COURSES

- *UGBA103: Introduction to Finance (Full Attendance Audit)* *2019 Fall*

Dmitry Livdan, Associate Professor, Haas School of Business, University of California, Berkeley
- *Coursera: Deeplearning.ai (Deep Learning)* Dec. 2018 – Feb. 2019

Andrew Ng, Adjunct Professor, Stanford University
- *Online Small-class Tutoring on Machine Learning* Mar 2019 – July 2019

Pradeep Ravikumar, Associate Professor, Carnegie Mellon University